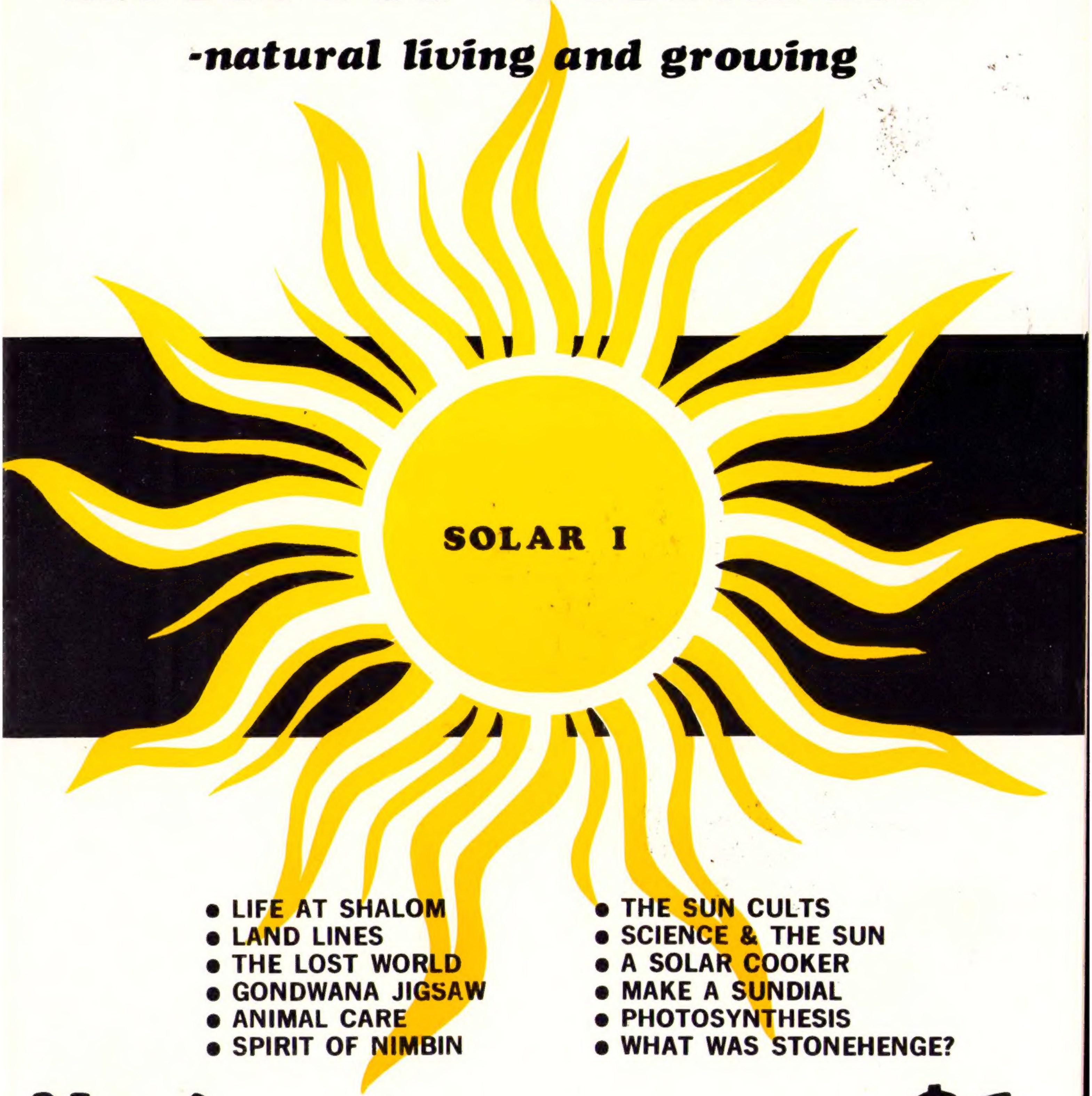
EARTH GARDEN

-natural living and growing



- LIFE AT SHALOM
- LAND LINES
- THE LOST WORLD
- GONDWANA JIGSAW
- ANIMAL CARE
- SPIRIT OF NIMBIN
- THE SUN CULTS
- SCIENCE & THE SUN
- A SOLAR COOKER
- MAKE A SUNDIAL
- PHOTOSYNTHESIS
- WHAT WAS STONEHENGE?

No. 6

September

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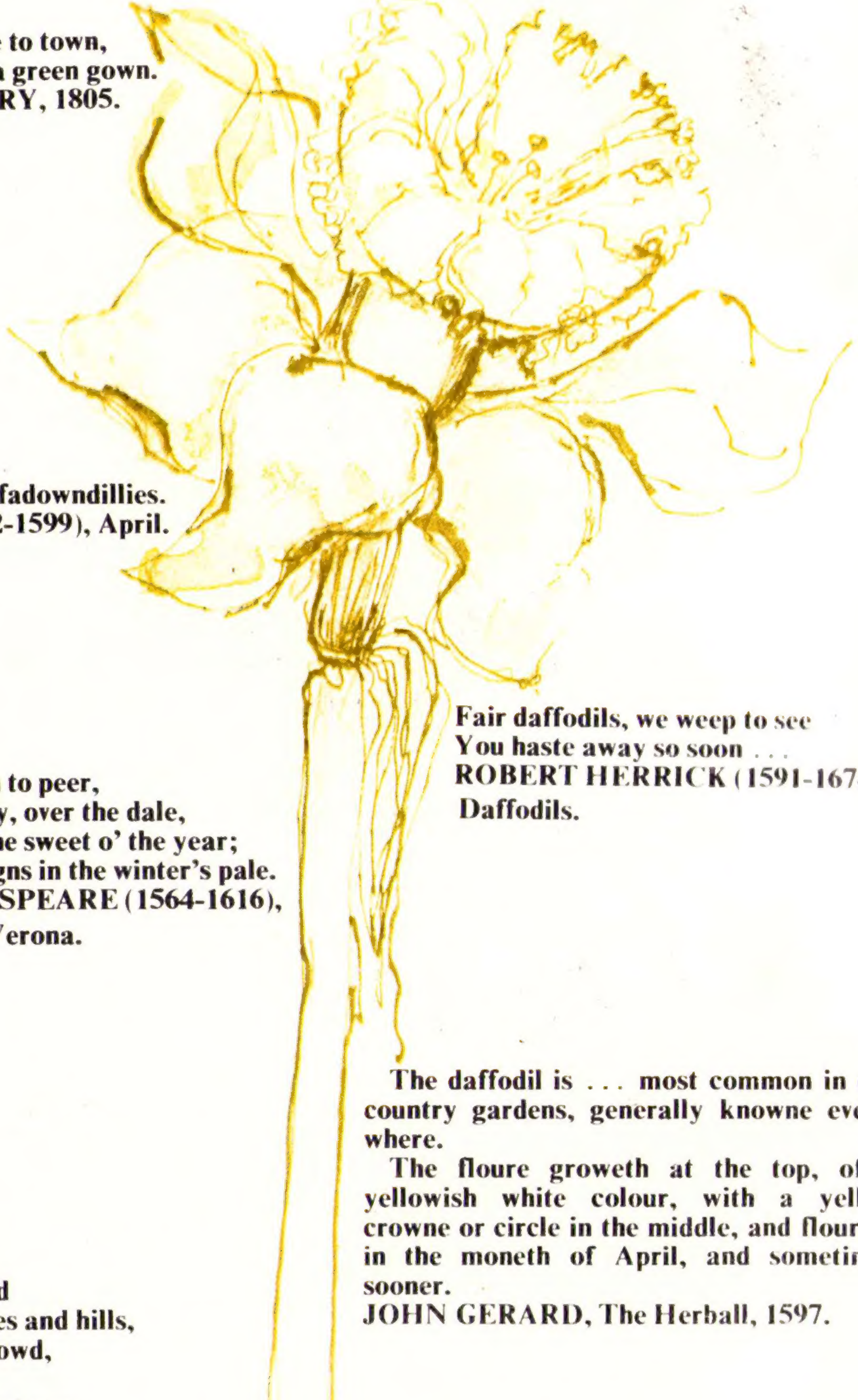
Spring

OF DAFFODILS:



Daffy-down-dilly is new come to town,
With a yellow petticoat, and a green gown.
SONGS FOR THE NURSERY, 1805.

Strew me the ground with daffadowndillies.
EDMUND SPENSER (1552-1599), April.

Fair daffodils, we weep to see
You haste away so soon . . .
ROBERT HERRICK (1591-1674),
Daffodils.

When daffodils begin to peer,
With heigh! The doxy, over the dale,
Why then comes in the sweet o' the year;
For the red blood reigns in the winter's pale.
WILLIAM SHAKESPEARE (1564-1616),
Two Gentlemen of Verona.

The daffodil is . . . most common in our country gardens, generally knowne everie where.

The floure groweth at the top, of a yellowish white colour, with a yellow crowne or circle in the middle, and floureth in the moneth of April, and sometimes sooner.

JOHN GERARD, The Herball, 1597.

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.
WILLIAM WORDSWORTH, I Wandered Lonely as a Cloud.

EARTH GARDEN No.6

EARTH GARDEN presents a range of natural lifestyles. It is intended as a key to sources, practical ideas, alternatives and self-sufficiency.

EARTH GARDEN is concerned with non-polluted living and growing, the back-to-the-earth movement, surviving in the city, the bush, food and diet and the inner changes which follow when you are in tune with Nature.

Let us lead you up EARTH GARDEN's path to the good life.

There are still no advertisements in EARTH GARDEN. Books, places and products recommended are those we think relevant.

Edited and published by Irene and Keith Vincent Smith.

Illustrations by Helen Haggath.

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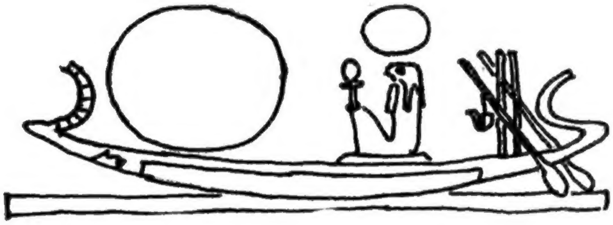
THE COVER: Front: The Sun, after John Coburn's
Sun Curtain in the Sydney Opera House
(NSW Department of Tourism poster).
Back: Triumph of a 16th century gardener.



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Land Lines

Land lines is a free service for EARTH GARDEN readers. It is intended to help those seeking to buy or sell land or searching for it, and those joining together for group land buying or allied reasons. It is not a lonely hearts column.

Readers must give their full names and addresses as proof of their sincerity. They have the responsibility to thoroughly check all deals.

We have a block of land, mainly scrub, and an organic garden, six miles from Bundaberg, Queensland.

We'll be away from next October 1973 until May 1974, so we are looking for someone to take over (care) for those months.

We are looking for a couple or a single person interested in organic gardening, wild plants, birds, earthworms etc. There is a small cottage (unconventional), and of course no poisons in the garden.

A. K. & D. Roos, MS 264, Childers Road, Bundaberg, Queensland, 4670.

Through EARTH GARDEN I would like to make contact with people who may be on — and working — farms in this area. I have been living here for 12 months now, along with assorted people and animals. I'd be really interested in meeting people who are doing the same thing. The only disadvantage is the lack of human companionship, and this would help to solve the problem.

Love, Robin Brake, 'Avondale', East Portland, NSW, 2847.

If you know of people looking for others to form/join a community in the country (NSW), I'd like to contact them. I've been looking for land for this purpose, but I've not had much success interesting my friends in an immediate commitment and I'm keen to get started.

Barrie Griffiths, 47 Kissing Point Road, Turramurra, NSW, 2074.

I hope to buy some land in the extreme eastern part of Victoria or southern NSW. There I hope to put to the practical test my dreams of organic gardening, dome building, beekeeping and handicrafts such as pottery, weaving etc. Because of the lack of bread and persons with similar ideas I am writing to you in the hope that some other persons in the same situation as myself could write to me.

So with a couple of chicks and guys all on the same trip I am sure that things could happen real soon. It would be really good to hear from people through EG, because it has been my major hope and guideline in planning my future moves.

Jai Guru Dev, Gary Pianta, Albert Road, Warragul, Victoria, 3820.

We have a bush block of 1,775 acres which we want to sell at $10 an acre and which we feel would suit a group of several families wanting to get away from the city completely.

It's a good climate and soil for fruit and vegetables and for anyone interested in growing vegetables as a source of income it is near enough to Canberra — four hours drive.

We are tired of seeing blocks being bought up by absentee landowners who only want it as a tax dodge and not for any feeling of love for the earth and the country life. We left the suburbs to come here and have never regretted it.

Valerie Auer, Jingalong, Tubbut, via Bonang, Victoria, 3888.

I would very much like to buy some land on or near the coast of NSW or Queensland — 20 to 100 acres. The problem is my US savings recently lost a lot of their worth in devaluation.

Is there anyone who is coming to the USA who has land for sale, and would accept cash payment in US dollars? If so, please write me and send a couple of photos of the land and all the details.

Thank you. Peter van der Have, PO Box 363, Summerland, California, 93067, USA.

Interested in group buying of land in NSW (with individual ownership)? We are. Contact Rob and Cathie, PO Box 97, Balmain, 2041.

We are a couple with one child and another due soon looking for others to join with us in buying a large tract of land to form an alternative and co-operative community.

We envisage people having own houses, vegies, chooks, goats or cow, but helping each other with large projects.

We would like to stay in Victoria, any takers? If anyone could give help or advice we'd appreciate it very much.

Peace, Lesley and Alex Serrurier, Crescent Road, Yarra Junction, Victoria, 3739.

We would like to begin or get into a scene where people have yoga, and its end result, as their predominant interest in life. We envisage a community type of living, farming organically, where people have their own dwellings and gardens, but work together on income producing ventures such as large-scale fruit and vegetable crops.

As pointed out in EG4 by Peter and Joan, a large acreage shared by several people is a most economical method of purchasing land. We are attracted to the north-east corner of NSW which is beautiful country and reasonably close to a capital, which permits partaking of the cultural advantages of a large city.

We are vegetarians and base our living on yoga and natural health principles.

Peace and Love, Xansu, Graeme and tiny Darcius, Box 1479, Townsville, Queensland, 4813.

PS: Would love to hear from similarly inclined people.

Illustrations by Tony Wedd.

Where the Razor's Edge sheers up,
And the Albert prattles down,
There's an In-between Where the grass is green,
And a world is lost and found.

THE LOST WORLD

This article is from Tony and Cilla Wedd who run a youth hostel on the edge of Lamington National Park in Queensland. Tony is an artist and recently donated a number of pictures for sale to aid Ecology Action, Queensland Conservation Council and the Wildlife Preservation Society.

The way we came to drop out of the rat race is worth passing on. We are running a youth hostel (The Lost World), way up in the mountains of the McPherson Range, and 25 miles from anywhere.

The Youth Hostel Association could find no one willing to live so far out and was on the point of closing down the hostel.

We sell a few paintings to buy essentials and run a car, we get half the 60 cents a night our visitors pay, and we sell a little produce.

However, there is room here for 20 couples willing to make the break, and accept the position of leaseholders with a three-year tenancy. Farmers do not want to sell, but they are often willing to have someone who will keep an eye on the place, gather up the tin cans and the bottles

Our goats and hens range freely all around, with the farmers' blessing (for goats eat the noxious weeds the cows avoid). And we have the company of young people who want to get out of the city for a swim in an unpolluted creek and a climb up the mountains in the unpolluted air.

In an arc around Brisbane, and about 75 miles away, lie the mountains of the Great Divide and the McPhersons. These constitute the Scenic Rim, and there are schemes to link up a series of hostels to make one continuous through walk-way; even, bless the thought, preserve the entire watershed route as one long National Park. Alas, there is more likelihood of it all being felled for wood pulp and chipboard, so time is short.

of wayward picknickers and chase off the rogues with guns and high explosives.

The YHA pays a peppercorn rent here, and the farmer is happy to have conservation-minded people around. We have all the ground we want to work, and there are the makings of a co-operative here, much needed to replace the nuclear family. We hope to build a kiln, for there is good clay in these hills.

We have 30 hives of bees, and the honey is popular as we conserve the best in flavour and nutritional value. Tony did a short course for beekeepers at the Agricultural College, and never once heard mention of the nutritional value of honey, let alone the medicinal ones: the best cure for burns we know, if you spread it on quickly after being burnt. It used to be the way of dressing wounds before the advent of chemicals.

We think you can do a lot towards saving the rivers and the skies from pollution, and that it is not enough just to give money towards conservation and wildlife preservation.

As a starting point we propose you should: (1) Eat nothing that is not food and (2) Wear nothing that is not clothing. Otherwise you are frivolously causing a run-down of natural resources, and supporting industries which cause pollution.

There are many other things, but for the moment let us look at these. Obviously we are going to have to discover quite a new sort of medicine, and for a start we have listed these.

COLDS: Fast for 24 hours. Resume with honey, onions and whole foods.

CATARRH, INDIGESTION, FOOD POISONING: Drink diluted apple cider vinegar, with honey if necessary.

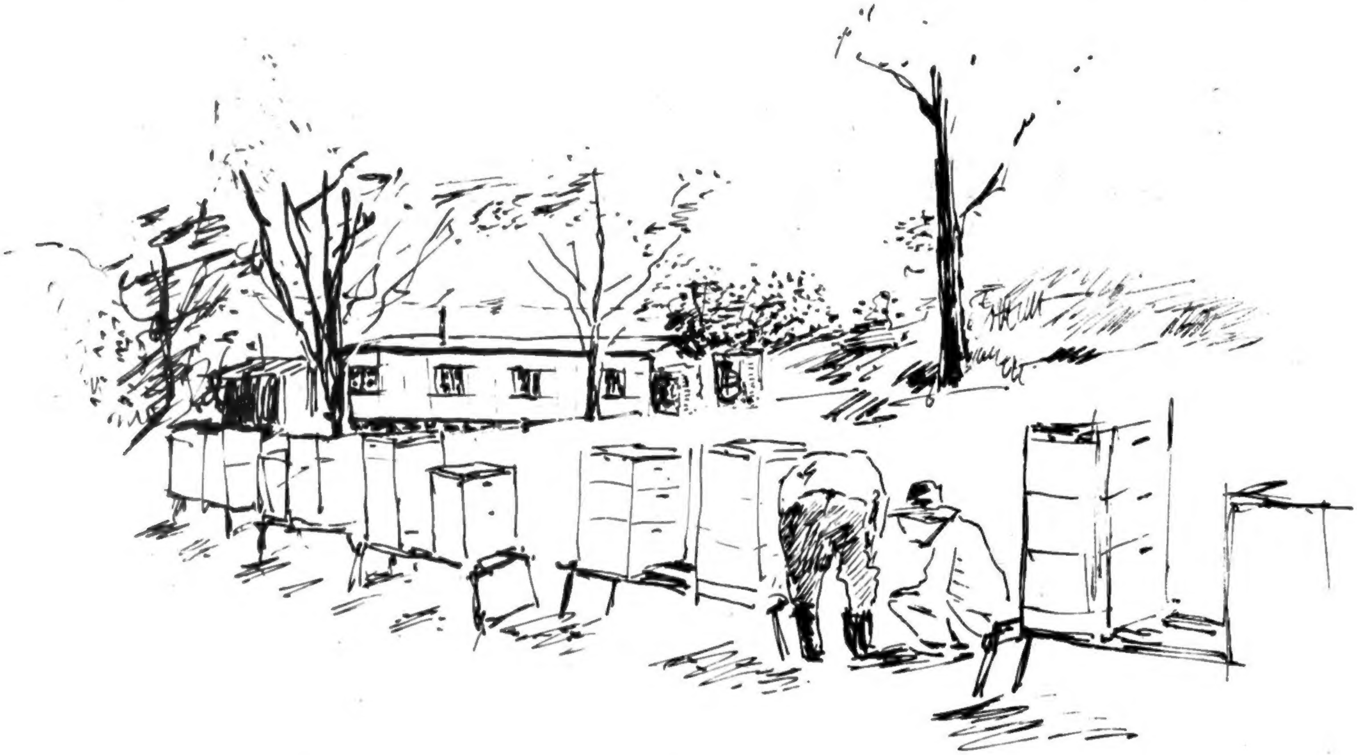
ANAEMIA, CONSTIPATION: Bake your own wholemeal bread.

HEADACHES (migraine type): Eat yoghurt. (Stress type): Drink quantities of warm water.

We are always on the lookout for similar cures. Comfrey is said to be healing, but our own experiments have been rather disappointing. Elder trees are also very good, so we are pleased to have acquired a sucker last week. If you can get hold of a head of elderflower, try this for a summer drink: It is called Elderflower Champagne, but it is fizzy, rather than alcoholic.

1 gallon of water
1 head of elderflower
1 lb sugar (raw) or honey
1 lemon, the grated rind and the juice only
1 tablespoon white wine vinegar

Stir the ingredients together in a plastic pail and leave for 24 hours. Strain into bottles and cork tightly. Ready



in a fortnight. Elderflower is the finest country wine I know, but there is a lot of work called for in picking off the florets. The berries make an excellent red wine, quite as good as Madiera if the season is a good one, which is not always reliable.

Up in the mountains here we often collect a leech on a walk. They come off if you touch them with salt. We have wondered if they could be used for swellings like bee stings and tick bites. We hear they were once used for bruises and black eyes, so there is this possibility. Can anyone pass on the details of how to keep leeches in captivity?

Dr Joanna Brandt of South Africa claimed to have cured herself of cancer with a diet of grapes as described in her "The Grape Cure". Cilla tried out this cure when she had a nasty abscess in the groin, shortly after giving birth to the baby. The doctor was offering surgery or antibiotics, neither of which went with feeding the baby at home. Cilla discharged herself from the maternity home 11 hours after producing the babe, and never regretted it. Three days fast and six days of only grapes put her right, and Elyssa has always been terrific.

We look forward to such hostels becoming the nucleii of a sort of commune equivalent to the Mediaeval monastery; pledged to provide hospitality and healing for strangers, and keep alive a little learning. As to things spiritual, we believe these are absolutely vital, though most people haven't a clue what this means, and we almost hesitate to use the word for fear of being misunderstood.

We ask the questions: What are we here for? Who am I? Are my dreams real? Can I work magic? These are not easy to answer. For lack of a better word, these are spiritual matters, which is to say that a machine will never come up with the answer.

The struggle to put things right must come from within. The questions we ask are not answered by the System. The things worth doing are those of the counter-culture, outside of the System. It only has a use for us as cogs in a machine, in spite of the obvious fact that that machine is producing too much; hence the emphasis on eating only food and wearing only clothing. Throw away that wristwatch and that tie, then. They are fastened on where fetters go. And do you always need shoes?

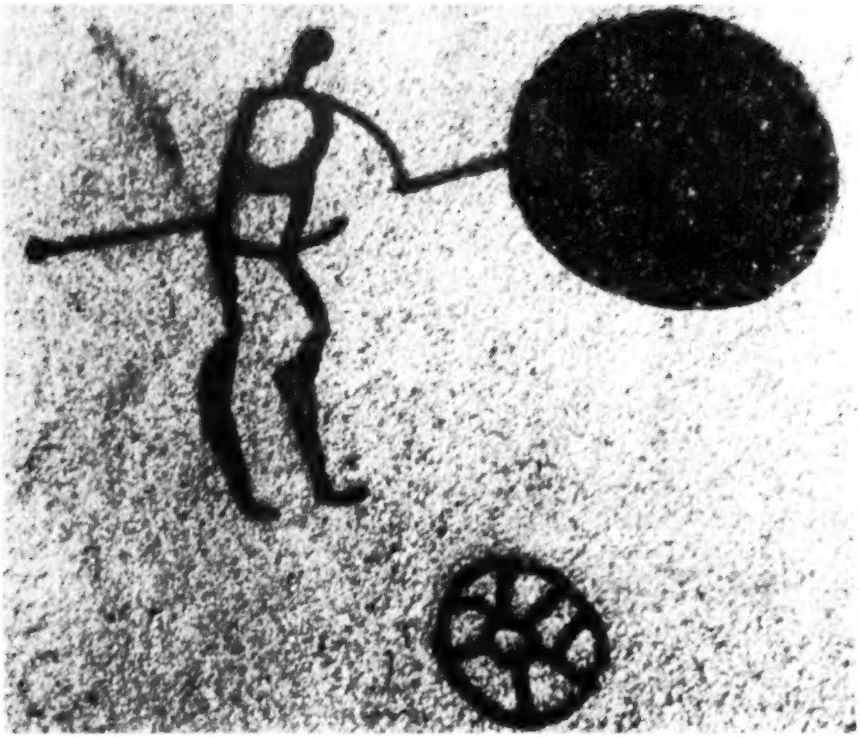
There is no point in filling a role. Somebody else could do that, so drop out and let them. The only thing worth doing is what only you yourself could do, and no other. It isn't worth wasting a lifetime on a role.

This is why the future belongs to the drop-outs. It is a rotten system, and it is already doomed. Don't give it lip service, but get to hell out of it for the sake of your own sanity and health. To save your soul, if we understand the term, rightly, get away from electricity and telephones, get out of the city and find some clay, some wool, some timber or some land. Discover again what is real, for you once knew it as a child.

When you produce your own, you will find that the bread and honey and eggs and milk are tastier than anything you could buy. So even on its own materialistic terms, the System gives you the third-rate, the shoddy and the ephemeral. Come to the Lost World, and we'll prove it to you.

Tony, Cilla & Elyssa.

The Warden's chair



Man, solar disc and wheel symbol from the Hvitlycke rock.

THE SUN CULTS

The sun is the source of all life on earth. Early man's worship of the sun seems, in retrospect, the most natural, rational and inevitable of all forms of primitive religion.

Man first saw the sun as human — an an ancestor, a parent, a sister or brother. He sought to invoke the sun's blessing in crudely scratched images of circles, spinning discs, spoked wheels, crosses and swastikas.

Archaeologists have found these signs on rocks or "sun stones" in every populated continent. Typical of these are the Bronze Age engravings from rocks in western Sweden scattered about these pages.

As well as the dominant sun symbol these show stick figures of men worshipping the sun, horses drawing sun chariots, ships bearing sun emblems and "disc men" carrying sun-shaped shields.

The stela at the left shows Akhenaten and Nefertiti making offerings to Ra-Aten. The god is represented by a solar disc whose rays terminate in hands.

Two of the hands — one above each ruler — hold the ankh, the Egyptian symbol of eternal life.

Sunrise starts every day. It brings warmth and light. Sunset brings the dark and cold of night. Light became a symbol of goodness; and darkness of fear and evil.

An underlying theme in the principal sun myths is the sun's journey across the sky by day lighting the world and its perilous night voyage through the nether world until its rebirth at sunrise. It was commonly believed in many primitive cultures that an eclipse took place when a serpent, a dragon or a sea-beast swallowed up the sun.

To the Egyptians the sun was Ra (who took many names and forms), to the Greeks Helios, Shamash to the Babylonians, Hu to the ancient Britons, Tezcatlipoca (Smoking Mirror) to the Aztecs, Bog-Yarilo (god of brightness) to the Slavs and Ameratsu (the sun goddess) to the Japanese.

In Maori tales the sun is the eye of Maui, placed in the sky. One Australian Aboriginal legend tells us that the sun was a golden-haired woman who appeared at dawn wearing a coat of red kangaroo skins.

Ancient Egyptian theology depended on the concept of the sun god Ra as the supreme god and creator of the Universe.

In one of many creation stories Ra rose out of chaos in the bud of a lotus, emerging from the blossoming flower as a solar disc. So life began.

In another version Ra was born each morning as a little child of the Star-Goddess Nut, or like a suckling-calf of the celestial cow.

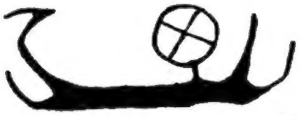
Some historians trace the origins of the pyramids to a further creation tale in which Ra was born on a primaeval hillock of mud as the Nile floodwaters receded. The heiroglyph depicting this consists of a rounded mound from which the sun's rays stream outward as Ra rises.

Ra sailed the heavens by boat, using one vessel by day and another by night, and a crew of minor gods. On his nightly journey he fought and killed a serpent before reappearing in the east.

He was also said to have been the first king of Egypt and was thus represented as a bearded diety with a crown as a disc.

Egyptians knew the sun as Ra-Horakhe, the youthful god of the eastern horizon, Ra-Khepre at rising, Ra at noon, Ra-Atum at setting, Amon-Ra the ram-headed god of imperial Thebes, Montu-Ra, a falcon with speckled wings flying through space and as Ra-Aten, worshipped as an obelisk or a golden disc.

In the middle of the 14th century BC in the sixth year of his reign the rebel Pharoah Amenophis IV changed his name to Akhenaten and sailed down the Nile to found a new city, Akhetaten, dedicated to Ra-Aten.



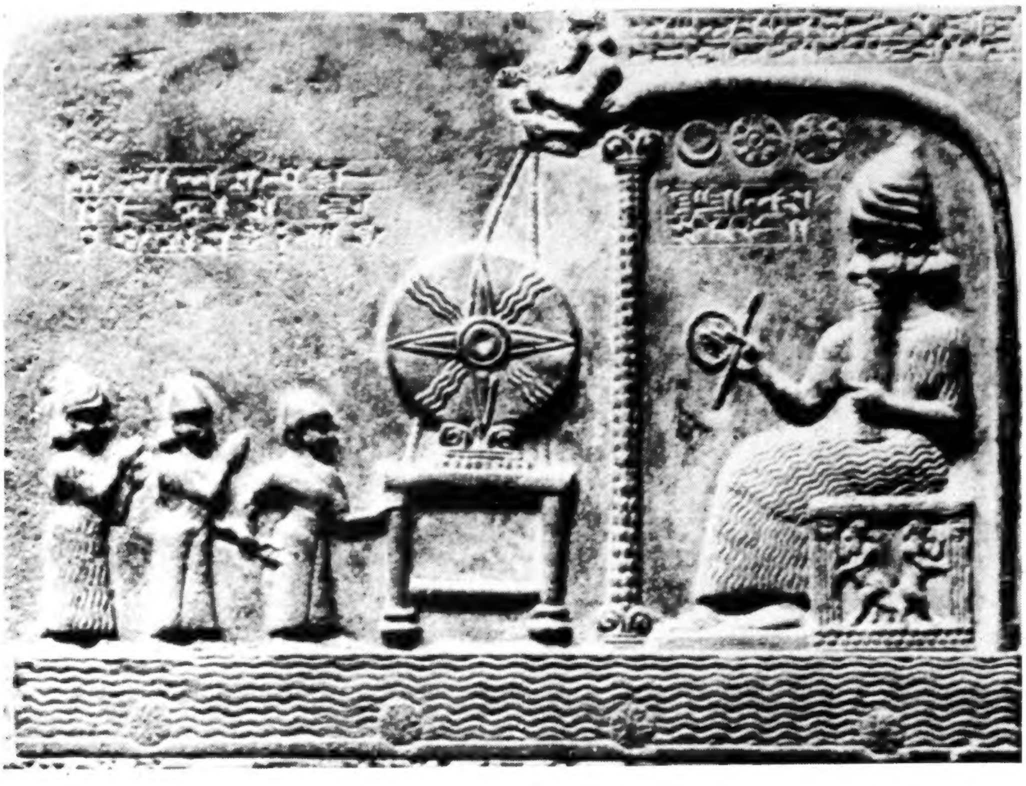
His heresy was in promoting the Aten, a minor god at Thebes, as the one and exclusive god. With his wife Nefertiti and three daughters, Akhenaten briefly converted the religion of the sun to a religion of love, preaching non-violence and the equality of men.

Akhenaten's temples had no roofs: the sunlight flooded into them. This was in contrast to the solar temples at Thebes, Heliopolis, Karnak, Abu Simbel and Denderah, into which the sun penetrates only at certain times.

But the priests of Amon-Ra prevailed and Akhenaten and his city were overthrown. He left behind a beautiful hymn to Ra-Aten which has survived until today, which runs, in part:

"When thou settest on the western horizon, the land is in darkness in the manner of death ... (but) when the day breaks, as thou risest on the horizon ... they awake and stand on their feet ... they live because thou hast arisen for them ... all beasts prance upon their feet, and everything that flies or flutters ... Praise to thee! (say) all beasts with one accord".

The Egyptian murals show these morning "prayers" to the sun by animals, sacred apes stretching out their limbs and birds opening their wings in the first rays of the sun.



In the stela of King Nabupaliddina, Shamash, seated in the temple, received homage from two worshippers and a divinity (far left) who wears a fringed robe.

On the altar, Shamash is also present as a solar disc. The stela, found at Sippar, dates from the 9th century BC.

Highly-developed sun cults lie at the bases of the Indian, Persian and Japanese religions.

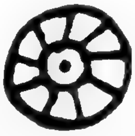
The worship of Mithra began in Vedic India, where he was identified with the sun. Mithraism began a slow shift to the west, arriving in Persia about 1400 BC where Mithra was a minor diety of light.

By the 1st century BC, when it arrived in Europe, Mithraism had become a secret cult of the Romans, though by this time the god had many more attributes added to his story. Some of these bore a strong parallel to Christianity and the cult was consequently bloodily suppressed and faded out in about the 3rd century AD.

Ahura Mazda, whose symbol was the winged solar disc, was promoted in Persia as the all-powerful god by Zarathustra and was revered by Darius.

The Assyro-Babylonians worshipped Shamash as the sun-god and protector of justice (an old man sitting in a court), Ninurta, god of the morning sun (an eagle) and Nergal, god of the burning sun (a wolf).

Shamash, a wheel of fire, rose each morning through the portals of a great folding door in the side of a mountain.



In Greek mythology Helios was the sun-god, who drove his shining four-horse chariot daily across the heavens from east to west. Returning, he sailed along the ocean stream with his horses and chariot aboard a golden ferry boat.

Rhodes, the "island of the sun", was his special domain. There seems to be an echo of Ra's primaeval hillock in the story of how Helios acquired the island.

Zeus had divided the earth among the gods, but omitted Helios, who was absent. Realising this, Zeus offered to create some more land, but Helios refused this offer, saying he had seen a fair land under the ocean.

Pindar tells the story in his ode to Diagoras of Rhodes, a noted boxer at the Olympics (Olympia 7):

"Out of the winding water the island blossomed, held of the father of searing sun-rays, master of horses that breathe fire".

The famous "Colossos" at Rhodes was a statue of Helios which stood astride the entrance to the island's port. A yearly festival was held at the god's temple at Rhodes during which a four-horse chariot was driven into the sea.

Because he saw everything which took place in the world by day Helios was often called upon by the other gods of Olympus as a reliable witness. The Acropolis at Corinth was another temple dedicated to Helios.

Orpheus was a solar hero who preached that Helios-Apollo was the greatest of all the Greek gods and who rose to greet the morning sun each day at Mount Pangaeum in Thrace.

Robert Graves comments on this in The Greek Myths (Pelican):

"The novel worship of the sun as All-Father seems to have been brought to the northern Aegean by the fugitive priesthood of the monotheistic Akhenaten, in the 14th century BC and grafted upon the local cults".

In later times, Apollo, son of Zeus and Leto, assumed the intellectual attributes of the sun. His worship as a god of light was based at Delphi, thought to be the centre of the earth.

The Romans, being more concerned with war, had no single sun-diety, though Jupiter appears with Mithra and Phoebus-Apollo in their confused and derivitive collection of gods.

They adopted from the Greeks the sun chariot as a sign of Royalty.

The horse is a solar beast. In the Sanskrit writings of the Rig-Veda (3000 BC) the sun is called "the runner", "the quick racer", and "the horse". Sophocles (Fragment 523) refers to the sun as "the eldest flame, dear to Thracian horsemen"

A 13th century BC sun chariot found in a bog at Trundholm in Denmark was a cult statue made of bronze covered with gold leaf and had six four-spoked wheels.

Sun worship seems to have been prevalent at this time, when Stonehenge and other stone temples were built in Scotland, Brittany, Ireland, Wales and Spain.

In South America the Aztec, Mayan and Inca priests predicted solar eclipses and kept rigorous solar calendars, nominating a god who ruled each day.

The Incas believed themselves to be the children of the sun, Inti. They lit a fire each morning and a priest cast food and honey on it, saying: "Eat this, Lord Sun, and acknowledge thy children"

The sun temple at Cuzco had doors sheathed in gold. On the western wall was a rayed sun disc embossed on a jewel-studded plaque, so arranged that the first light of sunrise fell on it and filled the temple with a strange reflected light.

The Aztecs worshipped four suns — the suns of water, earth, wind and fire. Tezcatlipoca, the snake-bird, was the symbol of the sun who received blood sacrifices in which the victim's heart was torn from his body.

The South American myths are strikingly similar to those of the ancient Egyptians. Dr Eric Thompson, who has been studying the ruined Mayan stone cities in Guatemala since 1928, tells of the sun's night journey:

"At sunset he goes into the Underworld. He steps into a hammock. He is carried through the Underworld and he stops at Midnight, right deep under the centre of the earth, gets out of his hammock and he's allowed a little snack, maybe a tortilla or two, some black beans.

"Then he resumes his journey, right up to the moment of rising again. But the trouble is that this Underworld is the land of the dead and the sun becomes as the inhabitants of the land of the dead — nothing else but skull and bones. So when he rises in the east, he's very weak, no strength at all.

"That's why people sacrifice to him: to give him flesh and blood to carry on his duties".

The Mayans "hidden civilisation" flourished in the jungles of Central America 1000 years ago until they were overthrown by the Toltecs. Their priests conceived of time on a vast scale. One stela calculates the day and month possible for a date 400 million years in the past.

what was stonehenge ?

What was Stonehenge? Who built it, and when?

For thousands of years these questions have puzzled those who looked upon that circular cluster of huge stones on Salisbury Plain and wondered about its origin.

It has been explained variously as a palace, a court of justice, a market, a sun temple, a place of serpent worship, a Druid altar of sacrifice or a city of the dead. Atlanteans, Phoenicians, Milesians, Druids, Saxons and Romans have all been credited with its erection.

Geoffrey of Monmouth, writing in the 12th century, said that the stones for the monument were transported from Ireland in the time of King Arthur by Merlin the magician.

John Evelyn saw Stonehenge on July 22, 1654, and noted in his diary that it was "indeed a stupendous monument, appearing at a distance like a castle". He thought "so many and huge pillars of stone" had perhaps been parts of a "heathen . . . natural temple".

We now know some of the answers. Stonehenge was a sun-cult centre used by three different groups of people over a period of 300 years, beginning in about 1900 BC. Its latest parts have been carbon-dated to about 1660 BC.

This was the period in Britain when the Stone Age was giving way to the Bronze Age, when Abraham was living at Harran (in Mesopotamia), one thousand years after the Egyptian pyramids and a few hundred years before the fall of Troy.

Stonehenge has 30 arches or trilithons in its outer ring and 30 inside, representing the days of the month.

Stones are sited so that the sun rose at the beginning of summer exactly at the end of a central avenue in a straight line with stones now called the 'altar' and the 'heelstone'. One trilithon marks the sunrise at winter solstice and another the summer solstice sunset.

The heelstone, possibly the first to be put into position at Stonehenge, is about 20 feet long, eight feet wide and seven feet thick. It is made of a sandstone called Sarsen, weighs about 35 tons and was probably brought from the Marlborough Downs, 20 miles north.

Bluestone uprights, weighing 5 tons each, are thought to have been quarried in the Prescelly mountains, in Pembrokeshire, South Wales, a distance of 135 miles — or 240 miles by sea, river and land, the method probably used.

Dr Gerald Hawkins, a far-sighted professor of astronomy, measured the alignments of salient stones and holes at Stonehenge in the 1960s and fed the results into an IBM computer.

The result: "To a mean accuracy of less than one degree, 12 of the significant Stonehenge alignments pointed to an extreme position of the sun. And to a mean accuracy of about a degree and a half, 12 of the alignments pointed to an extreme of the moon."

So Stonehenge appears to have been a giant sundial, a brilliantly conceived astronomical observatory. Here was a living calendar. Its priests could calculate the times to plant crops, could 'make' the sun rise and fall at selected viewpoints and occasions and predict eclipses of the sun and moon.

There were many more equally fascinating results and conclusions and a world-wide feedback when Dr Hawkins first published his findings in his book Stonehenge Decoded in 1966. The book could fairly be described as a gripping tale of detection — not one of crime, but one of history, astronomy and man and the sun.

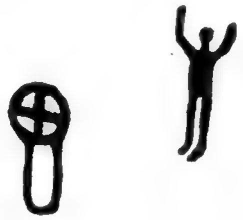
Stonehenge Decoded, Gerald S. Hawkins, Fontana paperback, London, 1972, 253 pp. Australia and New Zealand $1.40.

The trilithons and Sarsen circle.

Trilithon frames midwinter sunrise.

In Japan the tribal Ainu race worshipped the sun and built sun-dials. The sun goddess Ameratsu is the chief diety of the Shinto religion and people salute the sun by clapping their hands in the morning.

The "rising sun" emblem of Japan is really a stylized chrysanthemum flower. Cocks are held sacred to the sun because they salute the dawn.



Thor Heyerdahl in his voyages on the Kon-Tiki and the reed boat Ra, sought to find links between various early cultures, notably Egypt and South America.

On Easter Island he found the sun was called Ra and discovered that the first men who settled there in about 300 AD were sun worshippers, who built stone altars facing out to the sun and the sea.

These platforms, he says, were "oriented with great precision in relation to the rising sun at the solstice of the equinox.

"On the summit of the highest volcano, Rano Kao, they built a solar observatory and temple, with a device for marking the position of the sun".

However, the distinctive long-eared stone figures which have made the island famous were not connected with the sun, but were ancestor fetishes erected after 1100 AD.

When Dutch explorers named the island on their arrival on Easter Sunday 1722 they saw that some vestiges of sun worship still remained, even after the bitter civil war there during the 17th century.

As the sun rose the natives prostrated themselves and kindled fires in front of the huge statues.

Heyerdahl links the first Easter Islanders with pre-Inca Peru by their sun worship, their unique stone masonry and the fact that they built boats of totora reed, found only in South America.

Jehovah, the god of the Jews, was a solar diety in his earliest manifestations, according to Robert Graves in The White Goddess (Faber & Faber).

Graves says that the Hebrew Chanukah 'festival of lights' was a winter solstice celebration of Jehovah's birthday as the sun god.

Christianity has absorbed many solar traditions, one of these being the observance of Christ's birth on the day of the winter solstice, fixed by the Church in AD 273. Zeus, Dionysius, Apollo and Mithra were all reputed to have been born on this day.

Referring to the fixing of the Nativity date, St Chrysostom, a century later, said that the intention was that "while the heathen were busied with their profane rites the Christians might perform their holy ones without disturbances". He justified the date as suitable for one known as "the Sun of Righteousness".

Sun worship has left many traces in our everyday customs and superstitions — relics of ways of thought much older than our own.

One of these is the tradition of preferring a 'sunwise', or 'clockwise' direction, which came from the way of the sun followed in most dances, games and rituals. Widdershins, or 'anti-sunwise' is considered an unlucky direction to follow.

Bonfires burned throughout Europe and Scandinavia at Beltane, Midsummer and Halloween were memories of the rituals in which human sacrifices were burned alive to strengthen the sun on the first day of summer, turn of the year and the beginning of winter.

The Church condemned "need fires", in which a 'new' flame was kindled for a local area by friction, as a pagan practice in AD 742, but the fires continued until well into the 19th century. Bearers carried the new fire from east to west, like the sun.

Other hangovers of sun worship included Maypole dancing and the practices of rolling burning cartwheels and tar-covered barrels down hills at Midwinter.

In England and Ireland it was commonly believed that the sun shone brighter, or even danced, on Easter Sunday as a celebration of Christ's resurrection.

Watchers gathered on hills to observe the sunrise, or viewed its reflection in a pond or bucket of water. A popular Easter Day verse ran:

"But, Dick, she dances such a way
No sun upon an Easter-day
Is half so fine a sight".

In English country tradition it was believed unlucky to point at the sun, and very lucky to be born at sunrise. The sun always shines on Saturday, it is said, if only for a few minutes.

Our word for the sun has an interesting etymology. In Old English "sunne" had the feminine gender until the 16th century.

Primitive people often believed that the word had power over the thing. It is likely that the word for sun was a charged or magic word in Indo-European, from which our language is derived.

The Albanian word from the same source came to mean 'star' and its counterpart in Erse (early Gaelic) to mean 'eye'. In our Language (Pelican), Simeon Potter suggests that this is an example in which the symbol becomes to word.

Sunday, or course, is the first day of the week, sacred to the sun and observed as a day of rest and worship.

D. H. Lawrence was a writer who knew the sun myths and symbols of the ancients and used his awareness of light and darkness powerfully in his novels, short stories and poems.

Juliet, the heroine of this story "Sun", written in 1925, goes from the United States to the Mediterranean on doctor's orders, to be in the sun. She sees the sun lifting himself "naked and molten, sparkling over the sea's rim".

The sun gives Juliet her life and she gives herself to the sun, realizing she can never go back to the gloom of New York and East Forty Seventh Street.

Helios depicted on a floor mosiac in a Synagogue at Beth Alpha in Israel (580 AD).

And so we see the modern worshippers gathered on our beaches each summer weekend, exposing themselves to the most powerful force in our solar system, seeking warmth and gaining renewal in the sun.

Further readings:

Man and the Sun, Jacquetta Hawkes, The Cresset Press, London, 1962, 280 pp.

The Chariot of the Sun, Peter Gelling & Hilda Ellis Davidson, J. M. Dent & Sons Ltd, London, 1969, 200 pp.

Before Philosophy, Henri Frankfort etc, Pelican paperback, 1971, 275 pp. Australia & New Zealand $1.35.

Vanished Civilizations, Forgotten People of the Ancient World, Thames and Hudson, London, 1963, 360 pp.

Sinhue the Egyptian, Mika Waltari, Putnam & Co Ltd, London, 1951, 440 pp. (In a lighter vein.)

Science & the sun

The sun is like a gigantic thermonuclear 'bomb' in which matter is converted into energy.

Waves of infra-red, ultra-violet and visible light account for the sun's heat and light. But this radiant energy does not become heat that we can feel (sensible heat), until it is absorbed by some solid surface such as the earth, or another planet or satellite.

Every day the sun's rays reach out across 93 million miles of space, showering the earth with one thousand times more energy than can be used.

Most of this potential solar power is wasted — 55 per cent falls on the oceans and seas and nearly 30 per cent is reflected back into space from growing plants and man-made surfaces.

Solar energy is free and it is everywhere. It is clean energy, without smoke or noise or pollution of any kind.

Harnessing solar power is no longer a science fiction fantasy. The sun is being used today to heat homes and to cool them, to cook food, power furnaces and space craft equipment, and to heat, pump and distil water.

The promise of further and better exploitation of solar energy comes at a time when the world is being threatened by an "energy crisis" caused by a shortage of the traditional fossil fuels and the pollution caused by their use.

Our industrial machines are geared to fossil fuels, mainly oil, coal and gas. At present, 98 per cent of the world's power is derived from oil and coal. Natural gas, hydro-electricity and nuclear power provide only a fraction of our needs.

The reserves of fossil fuels are finite. Most estimates are that they will be in short supply by the turn of the century. Present known resources of all but a few metals will be exhausted within 50 years.

The demand for power is increasing — in the west to satisfy the demands of the 'standard-of-living' required in our industrial society; in developing countries to keep basic services abreast of the population explosion.

The world's population of 3,600 million is increasing by 72 million (two per cent) each year.

Ironically the fossil fuels themselves contain imprisoned solar energy. They are the remains of plant material that flourished in sunlight millions of years ago.

When we burn wood, we release the solar energy that was stored in the living tree by chemical action. Even the food we eat is the product of solar energy, transmuted into plant and animal tissue.

From 1750 to 1850, a short span of 100 years, men throughout the world used nearly as much fuel (two-thirds, to be exact) as they had used during the preceding

1,850 years.

The case for the utilisation of solar energy has been put by many eminent scientists, chief among them being Professor Farrington Daniels, whose book Direct Use of the Sun's Energy should be required reading for anyone interested in this subject.

In this age of specialisation, research in solar power has lagged, mainly because it cuts across many disciplines — physics, chemistry, meteorology, astronomy, mathematics and chemical, electrical and mechanical engineering.

Now diverse groups of scientists are getting together to work on the problems. Australia's CSIRO, for example, has conducted extensive research into the practical uses of solar power for 20 years. The main result has been the manufacture of efficient solar water heaters priced within the reach of home owners. Now the mechanical engineering division is turning towards home heating and cooling.

Nobel prize-winning chemist Dr Linus Pauling claims that we are wasting fossil fuels by just burning them up as a source of energy. Petroleum especially is a valuable material as a source of chemicals and should be preserved for the future, he says.

"I believe that solar power can be harnessed economically", Dr Pauling says, "and that all that is needed is to develop our technology somewhat beyond the state at which we find it now.

"If we were to expend a fraction of the amount on solar power development that we are expending on the development of breeder reactors, the new design of nuclear power plants, I believe that the effort would be successful and that we would be able to build solar power plants in the desert regions, and then of course transmit the power into the cities".

The problem with nuclear power plants is the disposal of wastes containing radiation which will remain harmful to man for up to 100,000 years. This problem has not yet been solved.

John O'Mara Bockris, professor of physical chemistry at the Flinders University of South Australia claims that a dangerous buildup of carbon dioxide is occurring in our atmosphere as the result of our reckless use of fossil fuels.

He explains it this way: "Fossil fuel plus oxygen gives carbon dioxide plus heat. That's how the energy conversion system works. That carbon dioxide is now rapidly overcoming the back photosynthetic reaction to oxygen — the building up of plants by the reaction of carbon dioxide to give green material is no longer being possible at the rate which it is being produced, and so it's building up in the atmosphere".

The carbon dioxide is not an impurity. It can't be filtered out. It is the main product of the reaction.

"Now it can be shown that this does unfortunate things to our atmosphere. To put it very briefly, it makes the climate change".

Sydney, for example, already suffers air pollution from fossil fuels at a level ten years ahead of predictions.

Professor Bockris and his colleague, Hank de Bruin, reader in chemistry at Flinders, have proposed the idea of a solar energy "farm" sited over brackish water in the Australian interior near Alice Springs or the Great Sandy Desert in northern Western Australia, which has less cloud in a year than any other part of the world.

Desert areas not more than 35 degrees north or south of the equator receive some 3,000 to 4,000 hours of sunshine each year. Everything points to the use of our barren desert areas for the building of a solar plant, or smaller plants, which could supply all our energy needs.

Dr Moss Cass, Australia's Minister for the Environment and Conservation, thinks solar power will probably be more important than nuclear power in the future.

"Australia is uniquely situated to exploit large-scale developments in the application of solar energy because of its huge land mass and long hours of sunlight," Dr Cass said recently.

"We could become the world leader in this field".

Perhaps there is no great Solar Age just around the corner for Australia or the world, but solar energy must play an important role in the future.

What other forms of energy will there be? Not many. Other natural sources are the winds (discussed in EG5), the tides, geothermal power (both limited by geography) and gases such as methane produced by the recycling of waste and manure.

A large sun-collecting station could be left in orbit, converting solar to electric power beamed to earth by microwave radiations, then reconverted to electricity.

A recent breakthrough has been the development of a process which refines silicon to a degree of purity sufficient to produce electricity from solar power at a reasonable cost.

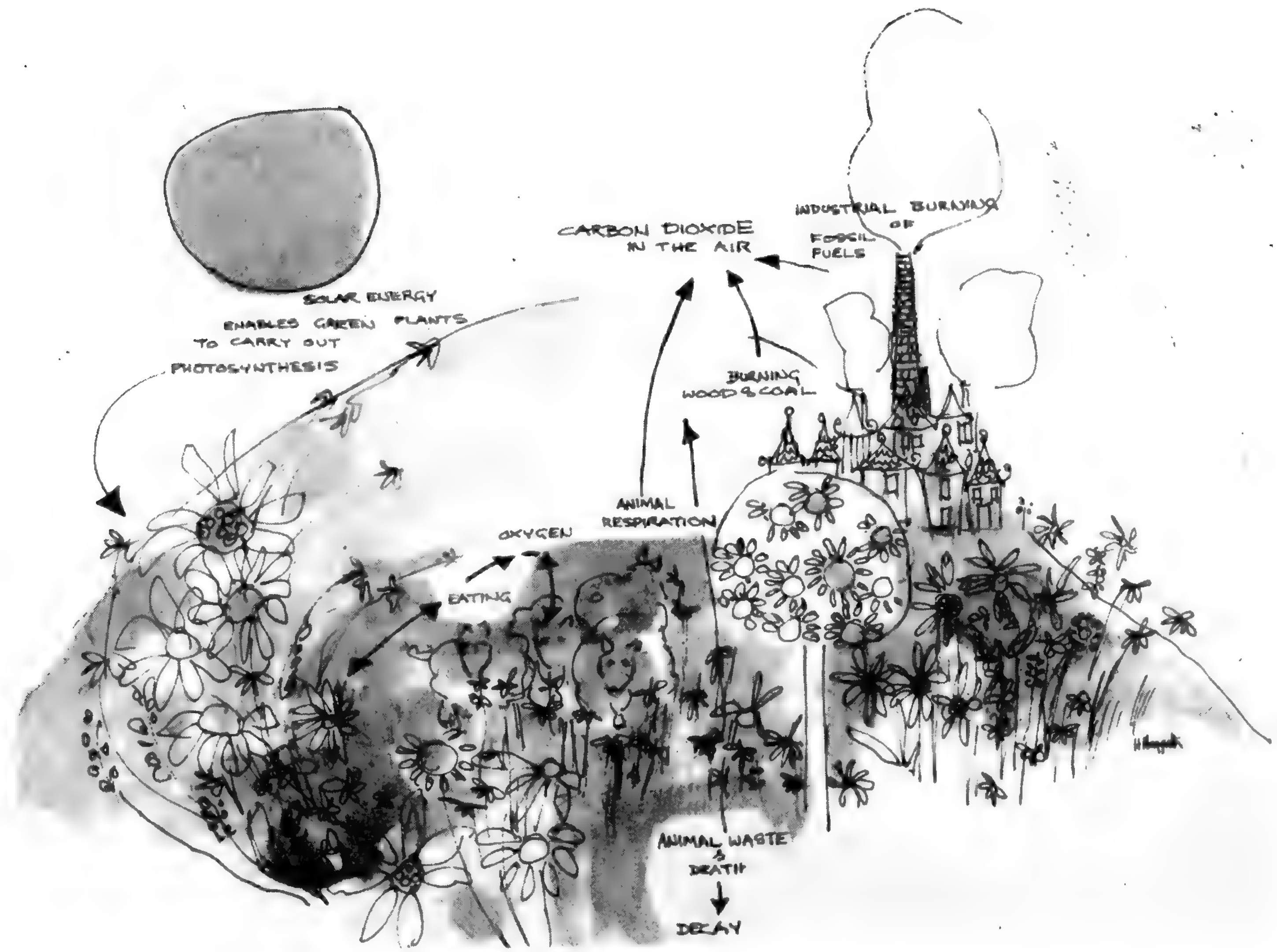
In Australia the promise of solar energy is currently being investigated by a committee of the Australian Academy of Science, under its chairman Professor C. H. Watson-Munro, of the school of physics at Sydney University.

Federal Minister for Minerals and Energy, Rex Connor, has set up a research unit to study solar power potential.

In the United States, Congress has just awarded the National Science Foundation a budget of $US 12 million for solar research this year.

Of course, there are drawbacks to the use of solar power and these should also be considered: it is of low heat intensity and therefore has to be concentrated or collected; it is intermittent because of night or cloudy weather; is low in winter and equipment can be used only part of the time. Storage of heat and electricity is very expensive.

In this first section on solar power in EARTH GARDEN, we intend to concentrate on simple practical applications of the use of the sun-solar reflector cookers and sundials. We also set the background for EG7 in which we will look at the history of man's discovery of the sun, solar hot water, solar distillation, the sun in the garden, greenhouses and other uses of sunlight.



PHOTOSYNTHESIS

Green plants have the ability to convert solar light energy into chemical energy. This process is called photosynthesis, from the Greek words 'photos' (light) and 'synthesis' (put together).

It is the basis of life on earth. Green plants create living matter from inorganic materials, they store energy to sustain life and maintain the supply of oxygen in our atmosphere.

Green plants are the first step in all food chains, both on land and in the sea.

Animals, by eating plants, release the energy stored in them, converting this to body tissue, nerve impulses and physical existence.

Bacteria works on decaying plant and animal matter, so raw materials are returned to the soil and the atmosphere.

Photosynthesis needs water, from which the oxygen is set free, and the remaining hydrogen joins with carbon dioxide in the air to form a carbohydrate (plant sugar).

Carbon dioxide + water + light form (in green plants) oxygen + carbohydrate + energy ($CO_2 + H_2O + \text{light} \rightarrow O_2 + (CH_2O) + E$).

The green pigment, chlorophyll, is present in all photosynthesising cells.

Chlorophyll absorbs the light energy and transfers it to electrons, acting as a kind of "excitement" agent.

Animal breathing is more or less photosynthesis in reverse. Animals breathe in oxygen and set free carbon dioxide.

Photosynthesis and respiration are part of the vital energy conversion cycle.

This shows how necessary trees and green plants are to our air. It has been estimated that 20 trees are needed to offset the effects of carbon dioxide given off by a car driven 60 miles in one day.

A solar cooker

Cooking with the sun should delight any ecologist.

The power is free. There is no pollution. No fossil fuels are used. No matches are needed. There are no flames to create a bushfire hazard.

In bright sunshine a parabolic (dish-shaped) reflector 4 feet in diameter can give heat which is equivalent to a 500-watt electric stove.

The United Nations and the former Association for Applied Solar Energy (now the International Solar Energy Society) have had little success in trying to introduce cheap solar reflector cookers into Mexico.

Among the reasons they were not accepted: they could not compete with cheaper fuels like wood and kerosene; they could not be used on cloudy or rainy days, nor after dark; and people did not like cooking outdoors.

"Do women in the United States use these cookers?" the anthropologists were asked. The negative reply destroyed the prestige of the cookers in the eyes of the Mexicans.

Solar cookers developed by the Indian National Physical Laboratory in New Delhi have been more successful. These were produced to sell at about $US 14 each (against the US-Mexican models at $US 25 each). But the cost to Indians is still high compared with $US 5 needed for enough charcoal for a year's cooking and home heating (and cattle dung fuel, which is free).

Many of the same drawbacks to the use of solar cookers would apply to Australia. But they have obvious value as an alternative which saves money and energy. They would be ideal for outdoor barbeques in summer.

A simple and economic reflector cooker can be made by scooping out a parabolic shape from the earth and lining this depression with aluminium foil.

The shape needed can be generated by suspending a garden spade or wooden paddle above the soil, using a rope or wire of the correct length.

A good formula for the parabola of a 4-foot diameter cooker is $y^2 = 100x$ — good because it is fairly shallow, so the digging is easy. The deepest point — the vertex of the parabola — is at the centre of your circle and will be 5¾ inches, tapering gradually up to ground level at the edges.

The point from which you suspend the spade — the focal point of the parabola — will be 25 inches from the bottom of the hole (not ground level) to the top. A tripod of bamboo or wooden stakes is an ideal support for the rope. Make sure it is suspended directly above the centre of the circle.

If you like you can smooth the surface with clay or mud, or strengthen it with soil cement. Allow this to dry before lining with strong aluminium foil or aluminised Mylar plastic.

After that add a rod and grille or some other arrangement to support your cooking pot.

Now in **theory** you have constructed a solar cooker which will function well for four hours each day (between 10 am and 2 pm) and will boil water in about ten minutes.

The theory **is** good, but in practice our basic solar cooker leaves something to be desired. Don't laugh, but we followed these directions strictly in constructing what we call the Nimbin Non-Cooker illustrated here.

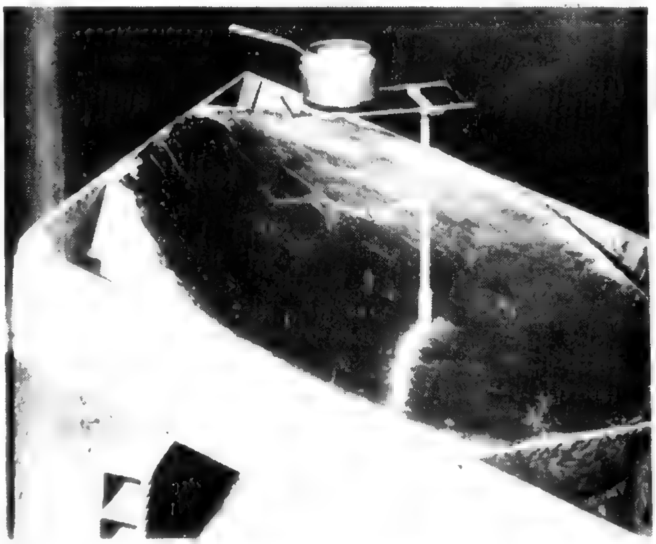
The Nimbin Non-Cooker

We were rather pleased with the result, especially by the fact that the total cost was only 38 cents (the aluminium foil).

But it did not work.

At Nimbin in May the sun was strong enough to power our cooker, but the sad fact was that not enough direct sunlight fell on to it. The reason was that the sun was **below the horizon.** The sun would have shone directly into the parabola between 10 am and 2 pm between September 23 and March 21.

You live and learn. We know now that our problem would have been solved if we had built the same cooker in a wooden box and placed it at the correct angle, like the efficient unit shown, which was built by Dr John Duffie at the University of Wisconsin in the United States. Scientists have all the clues!



Dr Duffie's Answer

We also could have taken a papier-mache cast (using newspaper scraps and flour-and-water glue) of that same hole in the ground, and lined the resulting lightweight portable dish with aluminium foil.

Much the same result could be obtained using plaster and hessian and the shell would be stronger.

In fact, if you had ideas of setting up a solar cooker assembly line, you would just have to reverse the whole process and make an earth or wet sand **mound** using the same parabola formula.

The correct shape is generated by rotating a sheet of plywood or masonite cutout of the parabola. Cap the mound with a half-inch layer of cement and sand. Smooth it, grease the mound and build up the plaster and cloth shell around a circular wire or bent conduit pipe.

After drying, paint the cooker shell with shellac and line it with aluminium foil, aluminised Mylar plastic, reflecting tape or a mosaic of small glass mirrors. You can turn out as many cooker shells as you like from this basic mound.

Other materials which have been used in the manufacture of experimental solar cookers are vermiculite and sawdust, wire mesh and plaster, inflated rubber, foam rubber and thin plastic shell.

In mounting the reflector plate you can make use of the bamboo sticks with which you found the parabola shape. Otherwise use thin metal tubing, fixed so that the plate can be refocused every 15 minutes or so to keep pace with the sun.

This way the cooker can be used all day, at least in the summer. A three-point support is good, and the reflector can pivot on one support. Another good method is ¾-inch thin wall tubing in the shape of a question mark. The cooker sits at the top of the ?, and the reflector at the bottom of the curve.

The parabola shape makes the best cooker, so here are two more formulae:

For a 38-inch reflector, $y^2=40x$ (focus to vertex/10 inches).

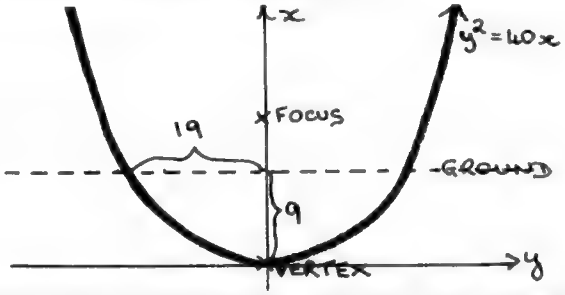
For a 44-inch reflector, $y^2=72x$ (focus to vertex/18 inches).

The 'hot-spot' should fall at the bottom of the cooking vessel. A blackened cooking pot is more efficient.

Lawrence Hargrave, Australia's pioneer in flight, built this solar water heater in December 1912. The conical surface was designed to reflect and concentrate the sun's rays on the central tube, which contained water. The outside surface was backed with felt insulation.

The cooker can be seen with the display of Hargrave's kites and engines at the Museum of Applied Arts and Sciences in Harris Street, Broadway (Sydney).

Photograph by courtesy of the Trustees of the Museum of Applied Arts and Sciences, Sydney.



Two views of an aluminium solar cooker developed by the National Physical Laboratory of India.

One side of the cooker is cut on a straight line so that it may be used early or late in the day.

To Make A True

SUN-DYAL

The sun was man's first timepiece, marking for him the succession of days, which he counted off on his fingers or recorded with sticks, or stones, or marks scratched on tree limbs or cave walls.

In The Golden Bough, G. S. Frazer writes that Australian Aborigines placed stones in trees at different heights to indicate to those following the position of the sun at the moment they passed.

They also threw sand in the air and blew with their mouths towards the sun, believing that it would go faster.

Here was a primitive way of telling the time, which may also have been intended to 'catch' time at the point so marked.

These calculations of time were important for agriculture and religion.

The Babylonians conceived of the first time 'units'. They divided the year into 12 months, the week into seven days, and the days into 24 hours. Their water-clocks, in which the passage of time was counted off in 'beru' (2 hours) of 30 'ush' (four minutes), were measured by the outflow of water. They split the circle into 360 degrees.

In the Berlin Museum are the remnants of an Egyptian shadow-stick which dates back to Thotmes III (1504-1450 BC).

Berossus, a Babylonian priest who taught in Greece about 300 BC, is credited with making the first sundial. This was a hollow hemisphere, similar to a bowl, with a bead at its centre to cast a shadow. The circular path of the shadow traversed lines engraved inside the hemisphere.

Sundials became the accepted method of telling the time. Every medieval church had a sundial and church clocks were set from these.

Until the 18th century small pocket sundials were the mode. In 1703 Joseph Moxon published "Mechanick Dyalling ... to Draw a True Sun-Dyal ..." in his Mechanick Exercises, the first serial publication, a work which freed the secrets of building sundials (dyalling) from guild members of the Masons.

Pocket sundials. Photograph by courtesy of the Trustees of the Museum of Applied Arts and Sciences, Sydney.

Urs Graf's Young Man Consulting a Pocket Dial.

**And then he drew a dial from his poke,
And, looking on it with lack-lustre eye,
Says very wisely, "It is ten o'clock:
Thus may we see", quoth he, "how the world wags.
'Tis but an hour since it was nine;
And after one hour more 'twill be eleven;
And so, from hour to hour, we ripe and ripe,
And then, from hour to hour, we rot and rot;
And thereby hangs a tale".
WILLIAM SHAKESPEARE, AS YOU LIKE IT (ACT II, SCENE 7).**

Traditionally sundials bear a motto, either etched on the plate, or carved in stone on the base. The most popular is the enduring: I count only the sunny hours.

Here are a few more from which to make a selection for your own sundial:

**In shadow I cease.
The Sun gives me Life and Speech.
As the Sun runs, so Death comes.
Sunshine for All.
Know the Season.
BON . JOUR . BON . SOIR
I do not stop.
Without a noise I reveal the hour.
For everything there is a Season.**

It was customary to grow mints around a sundial, so that their fragrance refreshes those consulting it.

From: The Book of Old Sundials and their mottoes, Launcelot Cross, T. N. Foulis, London, 1914, 102pp.

The most common type of sundial has a flat surface, the plate, on which a shadow is cast by an accurately fixed style (or gnomon). The plate carries the etched hour-lines and may be at an angle, vertical or horizontal.

In practice the sundial harnesses the sun's shadow. As the earth rotates about its axis the shadow appears to move, marking out the passing hours.

The sundial makes use of the assumption that the sun 'sits' on the celestial equator — our earthly equator extended into the sky — and travels in a circular orbit.

But in fact the sun strays from this equatorial path, travelling in an elliptical circuit, so that sundials have 'sun-fast' and 'sun-slow' periods.

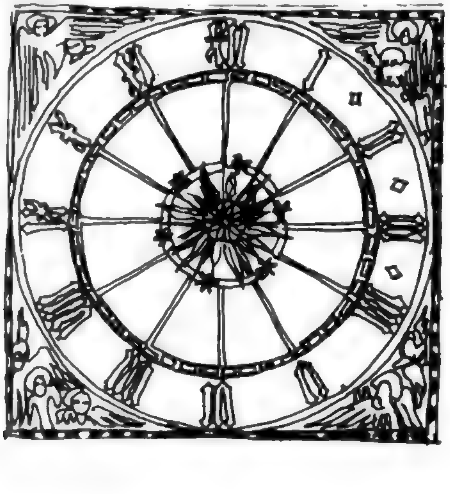
The style always points towards the celestial pole and the 12 o'clock lines runs in a true (not magnetic) north-south line.

You only need to know the direction of true north and your latitude to make your own sundial.

This will help you build a dial which will tell what is called "true local solar time". It's a few minutes out from the conventional 'unreal' time you hear on your radio. But it is the natural time to which the plants and flowers and the animals on your farm are geared.

The dial, based on a circle, is 360 degrees, which represents 24 hours. Each hour is a 15 degree segment.

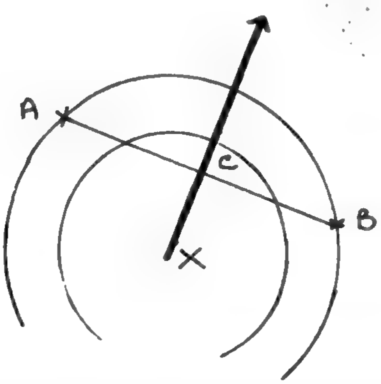
Mark out a circle on the dial plate. Then, using a protractor, mark out each 15 degrees. The markings and lines should be finely etched, because raised lines will cause shadows.



Next the 12 o'clock line has to be lined up on the north-south meridian. The simplest and roughest way to find this is by tracing it out along the shadow cast by a straight vertical stick at noon (by your watch or radio).

A better way is to trace out different positions at the end of the stick's shadow during the course of a sunny day. The shortest shadow is at noon. Trace this line — it's the one you want.

A third, and more accurate method, is as follows:



On a level board mark a point "X". Now, with X as the centre draw a series of concentric circles. At X place a vertical nail or skewer long enough to cast shadows on to the circles.

At some time during the morning the tip of the skewer's shadow will touch one of the circles. Mark this point "A". In the afternoon the tip of the shadow will again touch the same circle at another point. Mark this point "B".

Join the points A and B. Find the mid-points of AB and call it "C". Join C to X. This line is the true north-south meridian.

Now line up the 12 o'clock line with this meridian.

In a horizontal dial the angle between the style and the plate is equal to the latitude of the site of the sundial. For example, the latitude of Sydney is 34 degrees so this is the required angle.

For a vertical dial the angle you need is the complement of the latitude — that is 90 degrees, minus the latitude angle.

The easiest way to find your latitude is to consult a local area map. Measure the angle and set the style accordingly.

If your style is thicker than one-sixteenth-of-an-inch, make allowance for this by splitting the dial face down the 12 o'clock line. Make the gap equal to the thickness of the style.

There are many other types of sundials, such as the equatorial, the armillary and the helio-chronometer.

We could write a book about sundials, but fortunately several others already have, such as:

Sundials, how to know, use and make them, R. Newton Mayall and Margaret L. Mayall, Charles T. Branford, Boston, 1938, 197pp.

Sundials, Frank W. Cousins, John Baker, London, 1969, 247 pp.

Sundials, Roy K. Marshall, Macmillan, New York, 1963, 127 pp.

Sundials old and new (fun with the sun), A. P. Herbert, Methuen & Co, London, 1967, 198 pp. (nautical and arcane).

John and Margaret Fielder and their family and friends have set up an "Alternative". Health Centre on the banks of the Clohesy River, 30 miles from Cairns, in northern Queensland.

There they have built their homes and domes and have begun carving a garden paradise out of the tropical jungle over a 320-acre area.

Three days a week, John, a naturopath, attends his clinic in Knudsen's Lane, Cairns, where he also sells nuts and dried fruits. The rest of his time is spent at the Clohesy River working, healing and teaching.

His knowledge is shared with those who come to visit, to learn and to work, in a unique scheme which John explains in the following article we've pieced together from several of his recent letters.

Our friend Lloyd Abell helping in the garden.

Down by the river

BY JOHN FIELDER

Our growing methods are purely organic, in so far as we do not use any artificial fertilizers or sprays of any kind.

We believe, along with Sir Albert Howard, that it is the sick and ailing plant which is attacked by insect pests, and one not truly fit for human consumption.

Of course we realise that this sick plant can be produced by ourselves if we do not feed it correctly, or because of environmental conditions, such as waterlogging, tropical downpours, trying to grow unsuitable crops, and a number of other factors. But we do not believe that these things happen by chance, or the benign benevolence of providence.

Although we are basically fruitarians we do grow a few vegetables for guests, or for the odd occasion that we may happen to feel like a salad. We do make compost for the vegetable garden, following the Indore method, but for the fruit orchard we use sheet composting, which in fact is composting on the site.

That is, lay out compost materials in layers under the trees out to the dripline. This mulches them and at the same time stops all weed growth, which is a major factor in horticulture.

If weeds are permitted to grow under the trees they invariably rob the surface roots of essential nitrogen and can, in many instances, kill the tree. This is particularly so with custard apples and others of a similar nature.

We scrounge our organic materials from the neighbourhood, sometimes travelling up to 60 miles for them. In the season we transport filter mud from the sugar mills, a trip of some 30 miles; peanut shells from Atherton, 35 miles away, and also cow manure.

Fowl manure and horse manure mixed with wood shavings come from Cairns. A couple of years ago we were fortunate in being given as many bales of spoilt hay as we could carry away.

Naturally we wish to be self-sufficient. But we realise that a big percentage of our produce is carried away in the bodies of the people who come and go, so this must be replaced from outside sources if we are to keep up the balance.

Also much of our land had been impoverished before we came here. This must be replaced before we can expect to have fertile soil again, especially as the only method followed by these people was one of burning, which not only destroys the covering, but also the soil organisms so necessary for building the new top soil.

Our house is built of bush timber for the uprights and bearers. For the few walls we have we have used sleeper offcut slabs, which have cost us only their transportation from the logging site some three or four miles away.

Floors are made of ants nests, which we consider far superior to any other form of flooring, due to its very pleasant feeling when walked upon.

The hexagonal guest house is also built with bush timber and walls of sleeper offcuts and has a packing-case roof, covered at the moment with plastic. We are also in the process of building further accommodation from adobe bricks and a pottery shed is under construction in the rain forest.

A future project is a stone house, which we consider the ultimate form of homebuilding, being cooler in summer, warmer in winter, aesthetically pleasing and extremely durable. Stone is plentiful at the site, therefore it is a part of the natural environment.

Before we found this property and commenced to develop it, I was very aware of the need to have the opportunity to practice some of the health and organic principles, which were only just that, even if it was on rented land and basically benefited someone else.

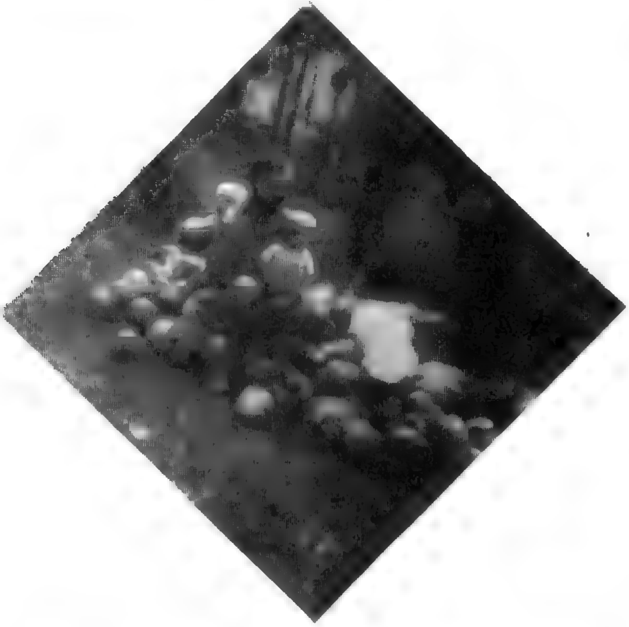
For about four years all my efforts in this direction appeared to be frustrated. Then we moved from Adelaide, South Australia, to Cairns.

After some four months we came into contact with a couple who were kind enough to give us the opportunity — by leasing to us a part of their property situated on the banks of Freshwater Creek, about seven miles from Cairns.

When we moved in the property was overgrown with lantana and guinea grass some six to seven feet high, interspersed with heaps of rubbish which had been left to the new owners by the previous occupiers.

Much of it I cleared by hand, but was very grateful for the loan of the tractor from the owner for levelling the worst sections.

Outside John and Margaret's house.



John, Quylie, Mary and Jim and a pile of coconuts.

Hexagonal guest house.

After this we set about planting it up with all types of tropical fruiting trees, such as avacados, lychees, Jack Fruit, breadfruit, Macadamia nuts, custard apples, soursops, cashew nuts, monsteria deliciosa and pawpaws

The owner's wife loved flowering shrubs and trees, so these were planted around the house and along the bank of the creek.

In The Transition (EG 4), Robert Rodale said: "If you're serious about farming and living on the land, look for opportunity, not glamour. Prepare yourself by study and practice sessions in farm living".

Although I had previously had practical farming experience, this was the first time I had the opportunity to put into practice my own ideas on organic farming on a large scale (and upon which I was totally dependent). If I failed to make it a practical proposition, then organic

Inside, looking out through hanging plants.

farming would fail in the eyes of those observing me.

It was an outstanding success. We grew what were acknowledged to be some of the best paw-paws ever grown in Cairns.

Three years ago we left that property for our present one. The trees at Freshwater Creek are now just coming into full bearing. It is like a beautiful park with lawns under the trees. I am extremely happy that I was able to be a part of its creation with all the subsequent pleasure, both for myself and to those who have, and will live there from time to time.

As we would like to give others this same opportunity we have developed a plan whereby people may come and learn by participation. We are willing to share our knowledge, both in health and in organic farming for the small fee of $2.00 per week and four hours work per day.

We must stress that the type of work can extend from washing dishes to digging ditches. We are also including a short list for the guidance of intending visitors:

Information for the guidance of guests at the Clohesy River "Alternative" Health Centre.

1. A fee of $2.00 per week, per person, in advance, is payable by all guests not receiving therapeutic guidance.

2. A minimum fee of $21.00 per week, in advance, will be paid by all guests receiving therapeutic guidance.

3. Guests, other than those under therapeutic guidance, will apply themselves to four hours work around the centre each day as directed.

4. Guests are not permitted to take, or use drugs in any form whatsoever.

5. Guests will recycle all organic wastes by the method of composting to alleviate any pollution of the environment. To further ensure the purity of the streams, soaps or detergents will not be used in or near them.

6. To ensure the conservation of the environment, guests will not remove, or otherwise destroy trees and shrubbery unless directed to do so.

The Fielder family inside a dome.

7. Guests will follow the Natural Health Diet as advocated by the centre, which has as its basis vegetarianism, and consists primarily of raw food.

8. Guests will provide their own food, except those under therapeutic guidance which may be purchased from the centre, as available.

9. The stated fees entitle the guests to one camp site.

10. Visitors to the centre are welcome. Any wishing to stay overnight, or longer, must receive prior permission before doing so. They will abide by the rules as applicable to other guests, and pay the appropriate fees.

INTERNATIONAL
SOLAR
ENERGY
SOCIETY

The International Solar Energy Society has its headquarters in Melbourne, with national sections in Italy and the United States.

The Society has as its purposes "the fostering of the science and technology relating to applications of solar energy, the encouragement of basic and applied solar energy research and development, the promotion of education in this field and the gathering, compilation and dissemination of information relating to all aspects of solar energy".

Individual membership is $US15 per year. Students enrolled at a recognised university or technological institute pay $US10 per year.

With the membership comes the Society's quarterly publication, The Journal of Solar Energy Science and Technology, the best source of news, articles, reviews and technical writing on solar energy. There is also a newsletter three to four times each year.

Write to: Mr F. G. Hogg, Secretary, International Solar Energy Society, PO Box 52, Parkville, Victoria, 3052.

* * *

Applied Solar Energy (Geliotekhnika), is published six times yearly in English translation of the Russian text. It contains mainly technical material, with occasional general articles. Published by Allerton Press Inc, 150 Fifth Avenue, New York, NY, USA at $US45 per single copy, or $US110 annually. Unless you're made of money, the best thing to do is to consult this magazine at your State Library as we did.

Clifton Pugh with one of the Death of a Wombat paintings. ABC Photo.

There's love here

Clifton Pugh is an artist and a lover and protector of Australia's fragile bush and its native animals.

He fights for their existence and preservation by communicating his beliefs through his involvement, through his position on the Council for the Arts, through politics, and through his art.

He grew up at Greensborough, near Melbourne, when it was still bushland. Now he lives at Dunmoochin, a cluster of houses on the shoulder of a hill "all amongst the gum trees", near Cottle's Bridge, 25 miles from Melbourne.

Clifton Pugh's paintings have won the Archibald Prize three times — last year with the portrait of Australian Prime Minister Gough Whitlam later used as a Time Magazine cover.

We visited Dunmoochin briefly last November and met Clifton Pugh and Judith. A fire was burning in the open fireplace. Wombalong, the cuddly little wombat snuggled up to us in the new woodlined kitchen. Through the windows we saw the two emus and the bush.

So we were thrilled when we saw the Australian Broadcasting Commission television programme "See It My Way" with Cliff Pugh talking about the bush in the segment titled "My Kind of Religion".

We thought it got across the answers to the questions we should have asked him ourselves. It seems to follow on naturally from our talk with Neil Douglas in the first instalment of Australian Self-Image.

What follows are extracts from that programme, reproduced by permission of the ABC and producer Brian Adams:

I felt a great necessity to learn something about the techniques of painting. I found that to thoroughly express better the things that I was starting to feel I'd have to learn a better way of saying it. So I went to the city, enrolled at the National Gallery School for a three-year course, but after two and a half years I'd really had the whole thing to do with the city, with all the noise, the smells, the chaos, the whole thing.

So I decided I had to get out into the bush. So I started looking for a place relatively untouched by people. But it still had to be close enough to the city, so I could have some communication and be able to express my ideas to people.

I found this place here and borrowed a tent, and within 12 days I'd built a wattle and daub shack with a dirt floor. I had to go all the way down the hill, about threequarters of a mile to a dam with an old jug and bring the water up. I spent 12 months not painting at all.

The land around here was pretty cheap, but there was very little money. So it seemed that the best thing to do was to get a group of people together and buy the extra land and try and secure the whole area against future development. So seven of us formed a co-operative.

We were all students and the agreement was to keep the land, about 180 acres, in its natural state. So each of us built our own house, mainly out of mudbrick, and out of sight of the other.

Our co-operative consisted of mainly painters, potters and weavers. And it still does. Our own house, a bit like Topsy, just keeps growing. Other people, they change all their furniture about. We just change rooms around. But all the time, just outside, is the bush. The unchanging bush.

When I first came up here I was on the dole and I didn't have much money of course. There were rabbits everywhere, all around the hills, so I borrowed a couple of rabbit traps and I set one out just down the hill. The next morning I went down to see what I'd got and there was a cat.

It didn't occur to me at the time it might be a wild cat. It was, I thought, just an ordinary cat, and I went up to it, you know, "pussy, pussy, pussy" and it just exploded into teeth, claws, fur, the whole thing, just exploded, and it tore me all over and I had to get a stick to let the cat out of the rabbit trap. So I never set another trap again.

But, what's interesting, in this painting here, which is a cat in the rabbit trap, I've tried to get that violent explosion of movement, but make it static. Try and understand my feelings about what it was and then out come the paintings.

To me Pugh is not only a great artist, but believes that nature knows best. He blends himself with nature and surrounds himself with the animals who share his property.

The kangaroos, the emus and cockatoos and the wombats — they are his models, inspiration and companions. When he walks in the bush it is full of life and beauty. His eyes, heart and mind are so Australian.

TOM UREN, Minister for Urban and Regional Development

Unfortunately it's just the right distance from Melbourne here for all these cat lovers to dump all their discarded cats and kittens in the bush and we spend a great deal of time recatching these cats and taking them back to a cats' home. It would take a short time for these animals to very quickly decimate all the local small bird population in this area.

But the cats can't get at my symbolic Owl, my watching and waiting bird. He sees savagery in nature. But what's interesting is that the savagery is never for personal gain. It always arises from some necessity — to eat or to protect a nest. There's no deliberate stepping on another animal to reach a higher place in society, like homo sapiens.

Animals don't go in for utter destruction, like humans, who are just daily destroying more and more of their own civilization. The occasional bushfire helps to balance nature's books. But it's only man that provides the permanent destruction.

Emus through the window.

When we came here — this is on the edge of my property here — all these hills around were just bush like this is. But since then they've cleared it because they've discovered that there's not such a thing as poor land anymore and they've supered it, put the trace elements in, and planted English grass and clover and they've fattened cattle on it.

Now we haven't touched this bush at all but what is happening is that the wind is blowing from these clear paddocks, blowing the super, the English grass and whatever it is they put into it and it's coming across on to here. And each year when I come down and do these drawings of orchids, and by the way there were a lot all

round here and they're going, they're all disappearing. This Kangaroo Grass is starting to be choked out because the English grass is too strong.

The point is that so much of the world is really ending up looking just so much like the rest of the world and I feel we've got to start now doing something about holding areas like this because in ten years time, with the march of the alien growth coming into here, this is not going to exist. So we've got to have large areas set aside now while it's still here.

We just assume automatically that we have a birthright, that we can go into the bush, walk through it, look at these wildflowers. But our children's children are just not going to have any of that unless we start doing something about it now. We must start preserving now.

Ten years ago I started to look after the Monash Zoology Department's sick animals. This started when the late Professor Jock Marshall was head of the Department. I'd met him earlier, because, for a short time, he was my Captain in the Army.

The Zoology Department quite often gets animals dumped on them by people, such as sportsmen, suddenly feeling compassionate after killing a mother, to find a baby alive in the pouch. It might be a darn sight more humane if they shot the baby as well. At least that act might bring something home to his heart. We've had as many as six baby kangaroos tied up in bags that are nailed on the kitchen walls. Seeing that some of them are blind and hairless when we get them we reckon our 60 per cent recovery is a pretty good record. At the moment we have Wimpy the kangaroo, these two emus . . . and Wombalong, the wombat.

Well, this is one of the creatures which well could be marked for destruction. Here's one now that's on its way out unless we do something about it. That's a female red kangaroo, so its blue, but these ones, these wombats . . . this one by the way was the model for the book Death of a Wombat.

Up to a few years ago they had a bounty of ten shillings a head. That meant that everyone would pile out from the city and go up to Kinglake, which is just near here, and just shoot them. Under a lot of pressure we've got the bounty off but they're still declared vermin. That still means every lout that wants to go and shoot something can just go out on weekends or at night and just knock them off.

Now I agree there has to be some sort of balance because up in Kinglake there are potato farms. All right, they should come under the area like anything else that you should get a permit to cull, but not just wanton shooting, which goes on at the moment.

These are the most lovable creatures. In fact, what we ought to do is, instead of cats and dogs, every home should have one of these. They're the most beautiful children's pets and they just love to be cuddled. Young Wombalong here. Her mother was shot — they found her in the pouch — and it was just luck that we happen to be known, and we're rearing her up now.

If, as has once happened to me, one is the subject of a Pugh portrait, that first sight of the finished picture can be both illuminating and embarrassing. He sees too much in what (my medical background tells me) is just skin, a bit mottled, puckered and thinned by age, supported by and revealing the bony structure of the face.

I fancy there is something of the same ability to transcend the obvious in his pictures of the bush, with its animals and birds, its droughts and its tragedies.

SIR MACFARLANE BURNET

The bush:

Well I've lived, and I've sat and I've worked and dreamt in this environment for 20 years now, and something about it gives me some feeling of faith, even of religion. Because when I look at all the organized religions right throughout the world, and look at their history, the corruption and violence, the wars, the killing, the destruction that goes on under that name of some God, it makes me feel that this is the place here. There's love here, there's faith and this is my religion.

Wombalong tucks in.

Organic Gardening

Organic Gardening and Farming is a monthly magazine, produced in the United States, packed with ideas that apply to natural ways of growing fruit, flowers, vegetables and crops anywhere in the world.

Begun by J. I. Rodale in 1942, OGF has rapidly picked up circulation from an initial 10,000 copies to an average of about 800,000 copies monthly throughout the world.

For the past 19 years Robert Rodale, the founder's son, has expanded its size and outlook, keeping the quality and content in line with the growing demand for news about non-polluted living.

He also brings a younger man's approach to organic living and his monthly editorial is likely to cover such earthy topics as the energy crisis, compost, politics, privies and details about farming in Japan and China today.

We've often mentioned Organic Gardening Magazine in EARTH GARDEN and you can appreciate what an event it is when a new issue arrives in a plain brown wrapper in our mailbox each month.

We read it from cover to cover, exclaiming at the new ideas, inspiration and sound common sense we find. America suddenly seems less foreign and far away than we had thought.

There's usually about 160-180 pages, making each issue the size of a regular paperback book. We'll try to give you a breakdown of some of the contents of the May, 1973 issue, so that you can see how much is crammed into those pages:

Firstly there are regular departments, like Organic World, with short notes from "all over" on organic topics, there are book reviews, pages of readers' letters, a garden calendar, farm and natural food markets, answers to gardening problems and healthy food, covered in Stocking The Organic Kitchen.

Another regular feature is The Organic Nature Lover, by Euell Gibbons, author of Stalking the Wild Asparagus and other books, in which he recounts his wayside adventures foraging for the wild foods of nature.

In With the Editor, Robert Rodale passes on some of the details of farming in a country where 700 million of the total population of 800 million people live and work on the land, gleaned from his recent 27-day visit to The People's Republic of China.

But the bulk of OGF is made up of small (2-3 pages) stories from organic gardeners themselves telling how they grew a particular vegetable, what went wrong, how they conquered their problems and marketed their goods.

In the May issue there was Richard V. Clemence on using a hay "tea" tonic in growing sweet corn, H. G. Lendle on gourds and ornamental corn, Floyd D. Bentley on water-melons, Nancy Pierson Farris on pole beans, Jean G. Bowman on parsley, Bonnie Coleman on mulching with rice hulls . . . so it goes on. There's at least a dozen more stories like these.

There's always a lot for the farmer too. One piece in the May issue which really stood out was by Robert Waller, titled France's Organic Beef Rancher.

It's about Christian de Monbrisson, a founder-member of the European Nature et Progrés organic association, who breeds and exports the Blonde D'Aquitaine strain of cattle.

Though he started using organic methods only in 1964 M. de Monbrisson has developed a commercially viable system of cattle raising which he calls "wide grazing". His 400 acres of pastures are interspersed with woodlots, chisel ploughed, fertilized with rock phosphates and seaweed and planted to 16 different types of grasses as well as herbs.

Quote: I knew I had to learn from the animals themselves, and as a result I discovered that cattle are forest animals and woods and pastures their proper environment. Now I let my animals do half my work for me. Yet we hear it said that animals must be kept out of the weather like sick patients in a sanatorium. So they are penned in like cripples, so as to reduce their expenditure of energy, crammed with bulky foods so as to make them put on the maximum weight at the minimum cost. These disgusting methods are not only cruel, but inefficient and uneconomic as well. This is disguised by inflation.

On the subject of farms, Senja Valero tells of "certain reservations" about life on the farm in Pennsylvania for which her family left their suburban house in Miami. At the beginning, she says, there was a crisis a day. But, after two years on the farm, she comes to this conclusion:

"Farm living, to us, is exciting, challenging, filled with activity, beauty and infinite variety. We love it. So if you want to buy a farm, bless you, do it. You may find it the most exasperating — and wonderful — experience of your lives!"

Another section of five stories on insect control has plenty of interesting facts to give on marigolds versus nematodes, insect-resistant varieties, biological controls, trapping codling moth and apple fruit fly and crop interplanting to control the insect population.

There's an intriguing article on night-blooming plants by Louise Riotte and, elsewhere, a list of flowers which open at various times during the 24-hour day from which you could grow your own garden "clock" if you could obtain the various blooms.

We haven't got to the end yet, but we think you should buy Organic Gardening and Farming and see for yourself. It seems to us a sound idea to subscribe now, while the Australian dollar is in such a strong stance against the US dollar.

Organic Gardening and Farming, published monthly by Rodale Press Inc, 33 East Minor Street, Emmaus, Pennsylvania 18049, United States of America. Subscription rates for Australia and New Zealand: One year $US6.85, two years $US11.45, three years $US15.45.

A concrete skin

BY RAY LEERSON

Not all of us have houses of brick, mud-brick, pise or stone construction. Some of us are stuck with weatherboard ones.

Besides regular painting there is another solution available — one that you can have a go at yourself. This is cement-rendering, a job ideally suited to winter, when the garden is not so demanding and the weather cooler.

Basically, it means providing a skin of concrete over the weatherboards. It's permanent, waterproof and cheap. It can also be done satisfactorily by an amateur — I've proved that.

The first thing I did was to write to the local branch of the Cement & Concrete Association of Australia. Their information started me on the way to doing my own place. They have offices in each State (the address is in any Pink pages).

Alterations planned for the outside of the house were completed first, such as new windows and sliding doors.

Next I replaced any plumbing fittings (drains from the sink in particular) that passed through the walls with either copper or PVC as the concrete skin would add an extra ¾-inch (in three coats) to the boards. I didn't want to have to shift any fittings later.

This done I set off to do the back wall, where no one could see me, as I had no previous experience in plastering.

Sections of 3 x 1½ inch timber were nailed along the bottom of the wall, and then flashed with tin. This acts as a base on which to build the 'skin'.

Waterproofed building paper is the next requirement. This is nailed over the weatherboards using one-inch clouts. Its purpose is to make the plastering easier and its thickness more even.

By nailing clouts halfway into the boards near where I wanted to position the top of the paper, it was easy to hang the paper on these nails, even though the sheets of paper might be 20 feet long by 6 feet high. Once in place bottletops were nailed every two feet or so and these held the paper firmly in place.

Then ½-inch birdwire was also hung on the clouts, over the paper and bottletops, and nailed into place every foot or so. The bottletops now prevented the wire mesh from clinging too closely to the paper. (Children are a marvellous help in collecting bottletops).

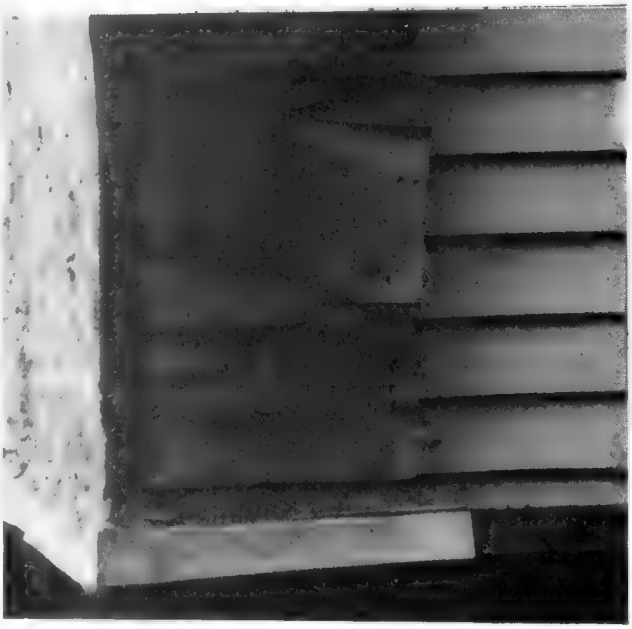
Fine sand is available here (Ararat, Victoria) at $3.00 a cubic yard. You will need upwards of 3 cubic yards, depending on the size of the house. The cement required is Portland type, A2 standard, and you will use a fair bit on the job.

The mixture used is very important. It has to be the same for each coat. It is: one quantity of cement to three quantities of sand for each coat. A 1:3 mixture is a waterproof mixture.

I have used a one gallon bucket to measure quantities — it seems an ideal size to start with. By all means try to borrow a cement mixer with a motor (or hand-cranked). Otherwise mix it in a barrow. It may even pay you to hire a mixer, but I haven't had to yet.

Needless to say, it has to be well mixed. The 'mix' itself

Ray in action with the float (right hand), and hawk (left). Note the upward sweep of the float.



The base-board, flashed with tin, then building paper and wire mesh.

has to be wet, but not sloppy. This is something you learn very quickly. In any case never add more water than cement (for instance, if your mix contains one bucket of cement, then one bucket of water is the limit) or the strength of the concrete goes down. Of course, you have to watch how wet your sand is to start with.

The plaster is applied to the wall with a steel 'float' and 'hawk'. A trowel is also essential for all the hard spots. The hawk is just a board of Masonite or 3-ply, about 9 inches square with a handle nailed underneath — like a one-legged table.

Dump the cement on the hawk with the float. Then, starting on the bottom board I spoke of earlier, sweep a portion of the cement off the hawk with the float, with an upwards sweep.

Sounds easy, doesn't it! But you'll soon get the hang of it. Getting enough thickness is a problem at this stage: a half-inch thickness is the maximum you will want anyway. Don't worry if you don't achieve this instantly.

Once your effort is firm, you must scratch the coat in two directions with a 'scratcher'. Made from a piece of tin, it has ¼-inch high teeth every inch or so. This is to provide a key for the second coat, which is about the same thickness as the first.

This is the one that you try to get fairly flat with the float. By this stage you will have the confidence to be able to do so. The professionals use a straight edge to get the surface flat. It isn't something I've yet been able to achieve.

So get a professional to help with the top coloured coat if you want it perfectly flat, or you end up with a more rustic finish, like mine. At this stage it should be pointed out that if you just want to protect a shed from the weather, then two coats, or even one will do the job. It's all a question of the quality desired.

The second coat is scratched down also.

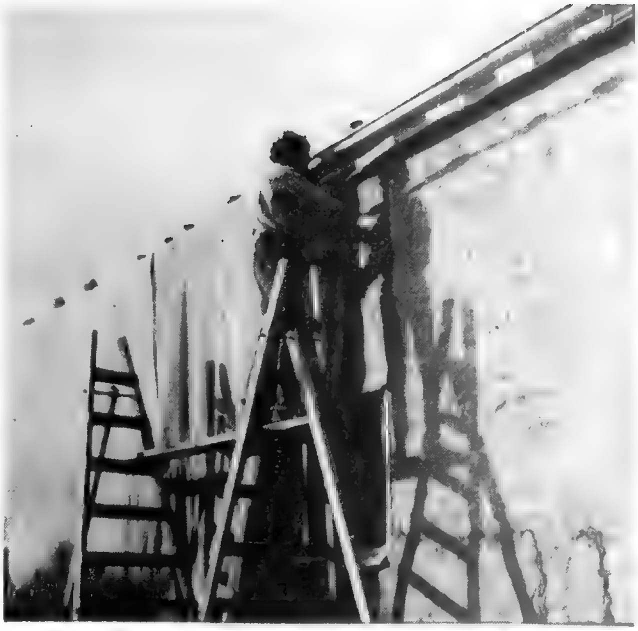
The top coat is very thin (say ⅛-inch) and usually coloured. You still use the same mixture of 1:3, but you make the mixture sloppy. This is the trick of getting it thin. Of course you have to wet the wall down before the last coat is put on.

Coloured pigments (Aust standard K54) are added to the mixer with the sand and cement and mixed as thoroughly as possible before adding the water and then stirred up again in the barrow to maintain the same colour.

From 6-10lbs of pigment per bag of cement will be needed, depending on the colour you want. It's a good idea to experiment a bit with pigments in the second coat on the back wall and choose the colour then, as well as the quantities of pigment required.

You may have problems with shading. However coloured cements are available as well as pre-mixed sand cement of whatever colour you want from ColourTex of Melbourne. You can make patterns in the top coat with a hearth brush after it has firmed a little, and so take out any marks made with the float.

The skin may also be painted with plastic paint. There are positive advantages — you will get the same shade of colour all over the house, it is easy to change colours and plastic paints have a very long life (15-20 years has been quoted). They also don't peel off. If you use this method the first coat of paint should be thinned down with water. It will then soak well into the concrete and the second coat finishes the job. In any case, painting should be left until a couple of months after the job is finished to allow the chemical reactions in the concrete to have passed.



The three-legged ladders, hessian 'curtains' and sprinkler hose.

The subject of 'curing' is of great importance. Once the plaster is dry, usually within 24 hours, you have to keep it wet, so that the chemical reaction will continue. The result is that the wall grows stronger all the time it is being watered. This is another reason why winter is ideal for this work.

The wall has to be protected from the sun, wind and frosts for up to a week. I kept mine wet for this period of time too. You certainly have to keep it wet for 3-4 days. Hessian curtains are the cheapest way of protecting it from the elements — it's worth the cost for the amount of time you put into the job.

The picture shows two other points which may be of interest. The three-legged ladders, designed by my Uncle, which are supporting the plank are very strong and steady. The materials cost only $10.00, 3 x 1½ inch hardwood being used. They are about four feet wide at the base and 10 feet high. The pivot point is a half-inch bar with threaded ends. The third leg is kept in the middle of the bar by two pieces of waterpipe.

A sprinkler hose is the other item. It has been nailed through the top flap to lengths of wood hung by wire hooks from the guttering. This way you can wet the wall by a turn of the tap.

In remote country areas, where bricks are too dear, cement-rendering is widely used, the building paper being nailed straight over the studs and plastering begun. Competition keeps the cost low and the materials (for three coats) cost about $1.00 per square yard of wall area.

It's a big job. But don't hurry, there's always next winter! If you are still interested then, remember to check the stumps under the house at some stage and replace any rotting ones with second-hand bricks.

The principles here would seem well suited to the construction of concrete domes over a wooden or steel-mesh frame. No doubt our friends at North Arm, Queensland (EG3) could tell us more of that.

All the best with your plastering and Cheers!

origins: the Gonc

Two hundred millions years ago the world was made up of one land mass in one ocean.

Australia was a southern out-thrust of that vast supercontinent which scientists call Pangaea ("all lands), washed by Panthallasa ("all seas").

Gradually Pangaea broke apart, until about 135 million years ago there were two major land masses — Laurasia in the north and Gondwana in the south.

Gondwanaland was a composite of what we now call India, South America, Africa, Australia and Antarctica. Any search for the origins of our island continent must go back to that distant age, more than 100 million years before humans trod this shifting age.

You'll probably hear a lot about the theories of what is called continental drift or sea-floor spreading when the Third Gondwana Symposium takes place in Canberra this August.

The conference is being sponsored by the Australian Academy of Science and the International Union of Geological Science.

The clues were there for centuries in our maps and globes. Like a child's jigsaw puzzle, the cut-out pieces of our continents and their surrounding underwater shelves can be slotted into their original positions.

Francis Bacon noticed the most obvious match, between Africa and South America, in 1620.

In the mid 1600s Francois Placet, a Frenchman, proposed that the Old and New Worlds were first split apart by the 40-day deluge and flood described in the Bible.

But when Alfred Wegener put forward the concept of continental drift in 1912 he was derided by scientists and specialists all around the world. Now the proof of his main theory seems beyond doubt. Interest in our changing earth has elevated it to the status of a "pop" science.

Wegener, a German, was an astronomer and explorer and died during an expedition to Greenland in 1930. The chief opponents of his theory were the supporters of the "land-bridge" school.

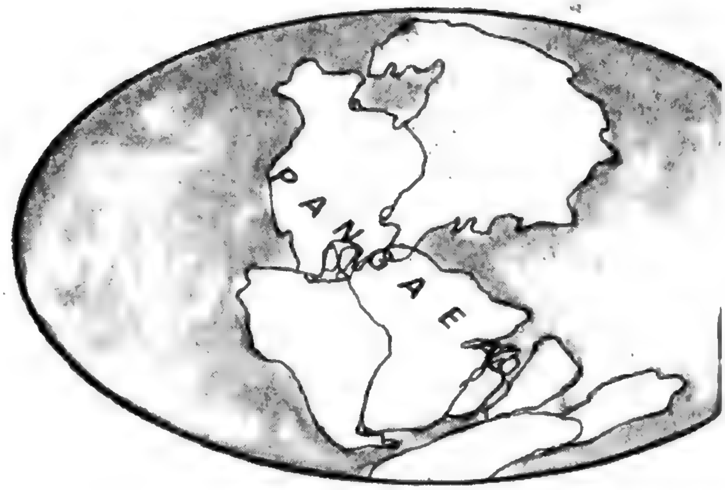
"The basic 'obvious' supposition common to both land-bridge and permanence theory — that the relative positions of the continents, disregarding their variable shallow-water cover, has never altered — must be wrong," said Wegner.

"The continents must have shifted. South America must have lain alongside Africa and formed a unified block which was split in two during the Cretaceous (period); the two parts must then have become increasingly separated over a period of millions of years like pieces of a cracked ice-floe in water. The edges of these two blocks are even today strikingly congruent".

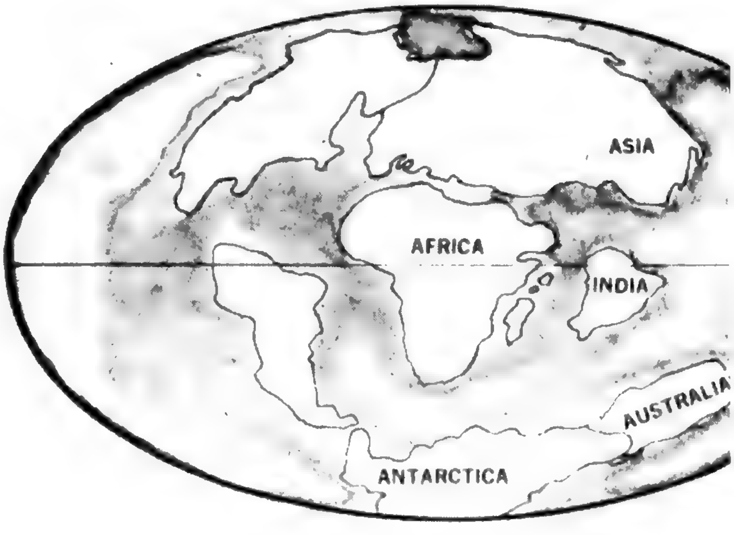
In the foreword of his book, The Origin of Continents and Oceans, which was first published in German in 1915, Wegener put forward a plea for less specialisation and more co-operation between earth sciences which could well be heeded today.

Wegener's theories were based on the geological similarities between the areas of Gondwanaland, including signs of ancient continental glaciation in some and similar plant fossils.

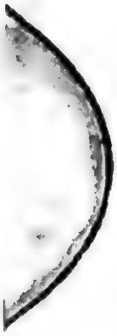
The new theory of plate tectonics states that the earth's crust is made up of a small number of rigid plates that are moving in relation to one another. These plates are 50 kilometres (33 miles) to 100 kilometres (66 miles) thick, and include both continents and ocean basins.



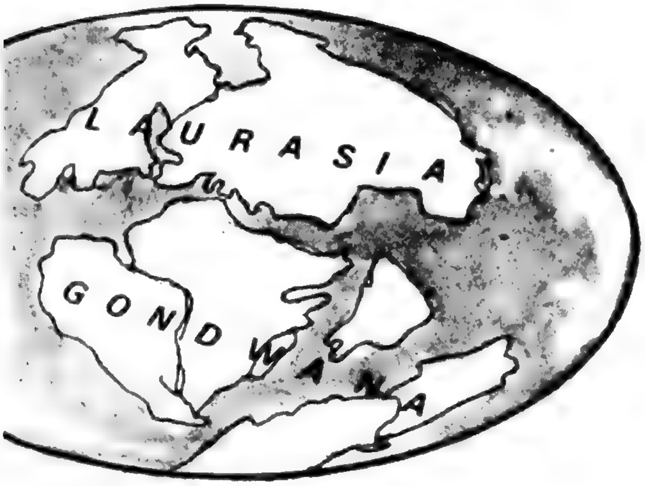
135 million years ago: Laurasia, the northern landmass has split from Gondwana, which has already divided.



wanaland jigsaw



200 million years ago: One supercontinent — Pangaea, washed by one superocean — Panthalassa.



65 million years ago: The oceans take shape. Australia moves away from Antarctica. India is still an island moving northwards.

The margins of the plates are marked by active volcanoes and earthquake belts, where the moving plates jostle each other.

In a process called "sea-floor spreading" the plates crack under the ocean, where they are thinnest, and molten rock spreads out, forming a "new" sea floor crust.

The oceans, in fact, conceal a mountain range some 40,000 miles long, winding round the globe like the seam of a cricket ball. Similarly, there are deep ocean trenches, down which the older formations are thrust into the earth's interior.

Nearly half of the present ocean floor is less than 65 million years old and the oldest rocks, up to 4,000 million years in age, are found on the continents.

A big breakthrough in support of the theory of continental drift has come from the "magnetic clock". As molten rock cools and solidifies on the floors of the ocean it records the direction of the earth's magnetic field at that time.

The earth's magnetic field has flip-flopped — reversing north and south magnetic poles — at least 171 times in the past 76 million years. So the poles as recorded in both continental and ocean rocks could be mapped, and, as it happened, they matched and helped date the separation of the various land masses.

The crust of the earth is also thought to be expanding, though no absolute proof for this has yet been offered.

Some of the facts disclosed by recent scientific detective work are fascinating. They include:

- Australia has moved north some 15 degrees of latitude in the past 45 million years. It is still drifting north and in 50 million years will have over-run Indonesia and moved higher than Singapore.
- Africa is also moving northwards, narrowing the Mediterranean, which only 6 million years ago was a 92-mile deep salt-pan desert caused by a blockage at the Strait of Gibraltar.
- A polar ice dome lay over what is now the Sahara desert some 450 million years ago. This was the South Pole. Today the Sahara is 30 degrees north of the Equator, having shifted 8,000 miles north around the curve of the earth.
- The mountains of Malaysia, New Guinea and Australia were all thrust up in the past two to three million years.
- The Antarctic ice cap was formed 15 to 20 million years ago, though it separated from the Great Australian Bight 45 millions years ago. Once it was covered by fern forests and inhabited by cold-blooded reptiles.

Violent change comes all to often to the earth in exploding volcanoes and shattering earthquakes, so perhaps it is consoling that the effects of continental drift are so gradual that we may never conceive of their influence in our lifetime.

For more information, an excellent guide to Australia and Continental Drift is contained in the special issue of **Australian Natural History,** December 1972 (Vol 17, No 8), published by the Australian Museum in Sydney. Single copies are available at 50 cents, plus 12 cents postage, from: The Government Printer, Box 4050, GPO Sydney, NSW, 2001, (pay to Government Printing Office).

Further reading:

The Origin of Continents and Oceans, Alfred Wegener, Methuen & Co Ltd, London, 1966.

Our Wandering Continents, Alex du Toit, Oliver and Boyd, 1957.

This Changing Earth, National Geographic, January 1973.

Shalom: the land of

How much land do you have here?

About 200 acres — 196 to be exact — but up and down the slopes it's probably nearer 300 I would say. One side is planted in pine trees and eucalypts. It forms a sort of natural belt around the property. Outside the pines is a firebreak to limit us, and from where we can always burn back into the bush when we get fires coming over the hills.

Another reason for the trees is to stabilize those slopes and to prevent erosion?

Yes, preventing erosion and also improving the climate in as much as it stops frost coming in, it warms the place considerably in winter and also is a windbreak for orchards and animals and so on.

What did it look like when you first came, nearly nine years ago?

Well, it looked like an abandoned dairy farm usually looks. It had been cleared, but because of neglect much rubbish, lantana and groundsel was covering the slopes and it got back in. If you don't do something about that, all the time it takes over. I think it must have been two, three, or even four years when very little had been done by the look of the vegetation. That had to be cleared and some permanent arrangement had to be figured out.

Our first job was getting the house into habitable fashion, because it also had been abandoned. Although it was a solid structure it needed internal work and cleaning. The next thing was to get the rubbish from around the house out of the way. And so we worked in ever-widening circles from the house and vegetable garden, getting Kikuyu out and planting things and then going further and further afield.

What kind of crops do you now get regularly?

Well, crops are always imagined as some kind of commercial commodity. We don't have crops as such. We grow food. Whatever we need to eat we grow. Of course some of it is with a long-term idea, like pumpkins, for instance, that store for a year, and potatoes. And then there are all the vegetables which we need continuously, all the root crops, carrots and turnips . . .

Do they grow all the year round?

Yes. There are certain times of the year. For instance carrots are very good to plant in February and March and we usually put the bulk in and that keeps us going, but we

Gerd and Ilse's house nestles among pines and Bunya nut trees in the quiet valley of Shalom.

plenty

keep planting all root crops all the year round. The other things we keep for seasons, like cabbages — all the cabbage family — we plant in the autumn now instead of winter, and the same with broad beans and we harvest them in early spring.

Soya beans are a spring crop. Even if we don't get frost we have enough cold weather to stop things developing through the winter like soya beans, tomatoes, capsicums — all these things that are frost-tender we plant from spring to summer. But chokoes, for instance, they tide us right through the winter because in May and June we have quite a big crop and we store them. We eat them raw mainly. One thing about chokoes which is quite interesting is the heart of the choko, the seed. The older they become the bigger this heart grows and we keep them separately and when we've accumulated 20 or 30 we use it as we would potatoes — we just heat them in oil and water and they taste exactly like fried potatoes. Even better I would say.

Then there's the citrus.

Citrus bears through the winter. It comes at a very handy time when very little else in fruit is being produced. Of course bananas, theoretically anyway, grow all the year around, but in winter the bunches develop much slower than during the summer so we only have a few bunches. But the citrus is quite abundant and we eat citrus practically all the winter as one meal a day is only fruit so we need quite a quantity of fruit all the year round.

What about the more unusual types of fruit, such as the aerial potato? Is that a native?

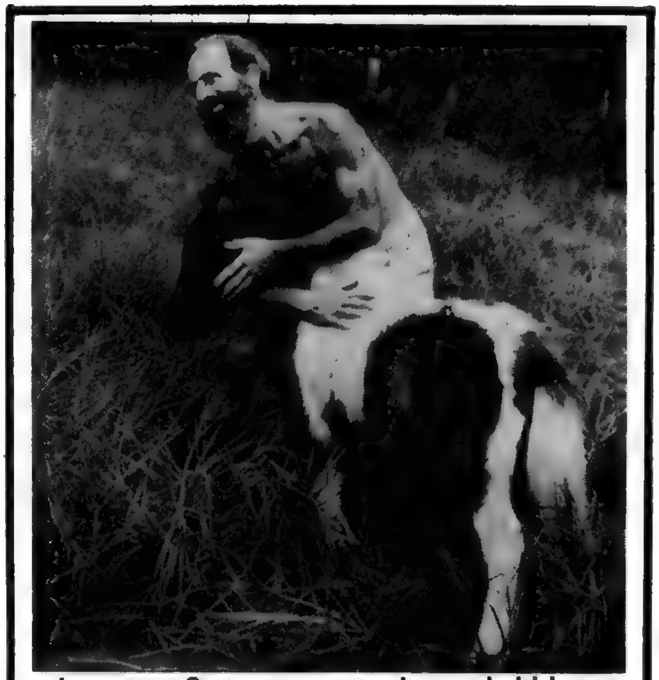
I think it is, yes. It's a vegetable really. It tastes slightly similar to a potato. It's purplish, and if you mix it with potatoes and pumpkins it sort of adds to the bulk. The beauty of it is of course that you know what you're getting. In summer we put in about 20lbs of ordinary potatoes and we dug out about 250lbs, which was terrific. But last week, the autumn crop, I put in about 5lbs and I got out 15lbs, which is not quite the same, so with the aerial potatoes you can see where you're going. They're hanging there. From one tuber I would say you would have at least ten potatoes hanging. They are grown as an ornamental in Queensland. We were given it by somebody as an ornamental. They get these immense, beautifully formed leaves. They get eaten quite a bit too by some grub.

The Bunya nuts would be considered unusual too!

Well, this is one of our main staples and the beauty of it is that we have no problem with growing it. It's been there since before we came and there's no grub problem, no disease. It just falls from the skies, so to speak, and all we have to do — which is enough anyway — is to pick them up, and crack them open.

They open by themselves, the pods, but then the separate nuts are in little pockets and you open those and then we spread them all out flat on the concrete under the house and dry them completely. If they're stored slightly wet they mould.

Then we have them dried. From that we can do a few



In pre-war Germany a young boy and girl began separate journeys which were to take them around the world, bring them together, and, finally, lead them to a new life in Australia.

The two children, Gerd and Ilse, were evacuated to Glasgow in Scotland. Ironically they never met there.

Ilse left to join her parents in Shanghai. Gerd survived an orphanage upbringing and graduated from Glasgow University as an engineer.

Then Ilse went to the United States with her family. Gerd went to Israel, joined the army, worked there and travelled extensively. Eventually they met in New York.

Since that time Ilse and Gerd Ledermann have participated in Professor Edmond Szekely's Rancho la Puerta in Mexico, a "health ranch", where their neighbour was Juliette de Bairacli Levy. They worked for two years for UNESCO in Pakistan . . . and travelled a lot more.

Now Ilse and Gerd, with their son Jeffrey, live a peaceful, self-sufficient life at their farm "Shalom", near Nambour in Queensland. If you didn't know, "Shalom" means peace and is the usual Hebrew greeting.

They have worked hard over the past nine years, converting an abandoned dairy farm into a pine-timbered valley, with park-like orchards and rustic paths and bowers.

Near one orchard is a tiny temple, where Gerd and Ilse have gathered together a collection of statues, pictures and other objects representing different world religions.

Formerly a creamery, the temple now provides a quiet place to meditate and to discuss family matters.

Their days are full, but varied. They grow their own food, bake bread, make cheese, milk goats and raise Shetland ponies (like Daniel seen in the photo with Gerd). Jeffrey helps out when he's not at school.

things. One is just boiling them in salt water. These we keep for about a week and every evening we just slice them down the middle and pop them out and eat them with our vegetables. Another way is to put them in an open fire and roast them like the Aborigines did during their corroborees. Then another way is to crack them when they're still raw and get the inside out into little pieces and warm them in the woodstove or rather dry them completely until they're hard, solid, just like corn. Then we put them through a flour mill and it comes out as a very fine flour. It's a particularly adhesive flour, almost better than soya bean flour, which already makes quite a paste, but this really makes a beautiful paste and we made chappatis with it. The fourth thing we do is to roast it again in the stove — keep it in longer than just drying, until it gets brown. That we grind and use as coffee. So we have four uses out of the Bunya nuts.

Ilse stands on the 'wagon-wheel' bridge. Bunya tree in background.

Is it a pine?

It is a pine tree. It's native only to about 100 square miles inland, 100 miles from here around Nambour and 50 miles north and 50 miles south, so were're practically in the centre. The Aborigines would have come into this area from all over Queensland during the corroboree time and during the Bunya season. This starts about the last week of January when you can hear the first nuts. We always know when they're coming because from the house you can hear them crashing. They're very heavy and when they hit the ground there's quite a resounding smack. If they're partially ripe they'll break open right there and then and we have to go and pick up all the pieces, but usually they just remain in the pod which weighs about 25lbs. It's very prickly on the outside. You gingerly lift it and bring it under the house, then we leave them to open up themselves and go ahead with the rest of them.

We've got time to wait, but I know the Aborigines used to climb the Bunya trees. They were hungry and if they weren't coming down they went up and knocked them down. One year we had a friend from Sydney who was very keen to taste them and they were about to come, but he couldn't wait and I climbed up a tree. It's a prickly job. I got a couple down but I couldn't possibly have got them all. There were about 40, which is quite a good crop for one tree.

I'd say it would take close to 15-20 years for the trees to bear. When we came there were a few young trees in the garden here and they were planted by the people who were here before the last. That means they must have been planted eight years maybe before we came. This last year, which means eight years since we were here, the first nuts fell off them. That means 16 years. But I'd say 20 years before they get really good nuts. These were fairly small.

They are a very beautiful looking tree, except that they are very prickly. When the branches fall on the ground you can't go barefoot there. But as you see we've planted a driveway all the way from the front gate of our property to the garden. There's about 50 of them. Of course during Bunya season time we-ll have to restrict the vehicular traffic, because if they hit a car roof it would make quite a dent.

Well, you see we've still got them now. This is June and I think we've never had that many before. They will probably last us until the new season, which is a very useful addition to our food. It's a thing which we get free just like the wild persimmons and wild guavas, Cape Gooseberries and raspberries and blackberries and mushrooms which grow in the bush.

What about herbs, what do you grow here next to the house?

We've got about 30 or 35 different herbs. We use them in our cooking, to flavour things. We use them to some extent in healing. We've read books and we realize what they can do and we're trying each time something comes up to use a herb to help the trouble. And we find that in the garden it does obviously help to keep pests out to some extent, but it's very hard to determine where the greatest cause of pest freedom stems from.

We do some plant combinations and the soil is built up with a lot of humus and sheet composting. So all that together — each one has some part in it — but it's very hard to pinpoint exactly what does what. We don't go into the thing in great scientific detail of examining each area if it has exactly the right companion. We do keep a number of herbs around the garden, quite a number, and we're sure that eventually they do their job.

And we do keep to crop rotation — roots followed by legumes, then manuring and then the heavy feeders and so on, and that too helps. But it's very hard to do everything correctly because you eventually come into difficulties if you want to have the right crop rotation, the right plant combinations, the right herb at the right place, sun and shade, also irrigation. So when you have all these factors involved you usually clash a little bit somewhere, so rather than get involved too much with it we just have herbs all over and we intersperse different types of vegetables so that they augment each other if possible and keep a proper crop rotation. And we find we might get better things if we went into it really deeply, but we get that much that we have most of the time a surplus anyway, so we don't think it's necessary to go into more detail.

The sheet composting consists of following the last crop you had with a layer of manure. We have goat, horse and cow manure. We spread that in a layer across that particular area and then we cover it up with mulch, either from a neighbouring farm or cut it on our own place, or from lawn clippings.

Does this cut down digging?

We don't dig at all. As the garbage accumulates (kitchen wastes), I just open up one area of the mulch and I spread the kitchen wastes and then cover it up again with the mulch. Then each day or two days I put another pailful until that whole area is covered. Usually by the time the area is covered the first pailful is already completely disintegrated. You go back there and you just see black stuff and it's really rotted in, so seemingly this layer of manure and the layer of mulch on top, except for some things, like nuts, which we no longer put in there. We keep our nuts for mulching, like stone mulching, we put them over flower beds. They serve almost as well as gravel, quite ornamental.

How about mulching fruit trees?

We usually cut out grass to the dripline of the tree and there we occasionally put some manure and we always keep it mulched to keep the roots completely free of grass. But in the orchards themselves we've found that, although grass is detrimental to trees, it's the most practical thing to have a lawn and keep mowing it. It looks nice and the clippings serve as mulch in the vegetable garden. It's not altogether in vain to mow, but to cultivate would mean digging and you'd have continuous weeds, and, again, cultivation. Although we may get bigger crops, again we've planted extra to take care of poorer crops and of all the animals who share like wallabies and possums and parakeets. We have a lot of big animals. We share our produce more with the larger type of animal than with caterpillars, though the caterpillar situation seems to balance out with mantids and ladybirds and biological control and strong plants. Whereas the big animals don't balance out. They were here before us.

The wallabies eat the soya beans and the only way to do anything there is to put chicken wire around to stop them. The birds and possums get into the bananas and we put sacks around them and sometimes it doesn't help, so we have that many bunches that we couldn't eat them all up anyway.

You've got bees on a small scale?

Bees, yes, just sufficient to give us about 300lbs of honey a year and this gives a certain amount of pollination in the garden. Although, without our bees, a lot of other wild ones around do a lot of pollination. We find it a fascinating hobby and we certainly need the honey and with honey prices recently going up so much, 300lbs of honey is quite an addition to our economy. We keep looking after the bees because without looking after, they wouldn't thrive at all.

We leave them at least a super full of honey in winter. Only about three weeks ago I went out to look and there was a complete super, about 50 or 60lbs of honey ready to extract, but I resisted the temptation knowing full well that if I let them eat it they'd come through strong in spring. As the winter's not very severe and warm enough for them to keep going through the winter and eating that honey, they usually pick up very fast in spring and in November we can already start extracting.

They work in winter?

Yes, they work, but of course the blossoms are very limited and they need this extra reserve, whereas in summer it's the other way, they're building up and we keep putting new supers — we have as many as four on top — and they keep filling them because there's so much. Then they breed more. The queen realizes a honey flow is coming so she lays a lot of eggs. They get a lot of new workers and they bring in a lot more honey. In winter she lays less and they reduce so there aren't so many to feed because they know there isn't enough around.

Have you always had goats since you've been here?

Well, not right at the beginning, because we felt at the start that to build up this type of self-sufficient existence you have to do it methodically and in slow steps and do everything properly, rather than start and get too enthusiastic and start bees and goats and vegetables and trees. Then you haven't got the time to look after them properly and then eventually they all suffer.

Once we had gardens going and some orchards planted and quite a few thousand pine trees — we'd been getting milk from the neighbouring dairy up to this time and making cheese with it — we thought it was time for goats. But before we got them we built two houses for them and a place to milk them, and we made a couple of little paddocks of Kikuyu. Then we got goats and we were ready for them. The bees we got even later than that because we felt we couldn't do them justice. We decided we'd wait until we had enough time and a place to put them and so on. That way each thing was integrated and functioned as it should.

From the goat's milk, you're making cheese using acidopolous?

The acidololous culture we brought with us from the health ranch in Mexico. It's a living culture which we feed every day with milk. It produces cottage cheese. It does make yoghurt first, but the yoghurt isn't as good as the cheese, so we keep the yoghurt for one more day and that makes the cheese. When it's dripping off it produces the whey which we evaporate on the wood stove while we bake our bread and roast pumpkin seeds and make jam and roast Bunya nuts. We also evaporate seawater and make salt and at the same time we also put on the whey cheese, so when the wood stove goes we get up maybe at 3 am in the morning to get it going and by about 8.00 or 9.00 we've got whey cheese, bread, roasted pumpkin seeds and Bunya nut flour all simultaneously. Then, we also have tried making hard cheese according to recipes we've seen in EARTH GARDEN and that other people have given us. It's still in the experimental stage. We actually went to a nearby cheese factory and they were very co-operative and gave us rennet and starters and long explanations on how they make their hard cheese. We tried it once, but the temperature controls and innoculating starters every day to keep them going ... we got that tired and in the end we had a little lump of cheese which wasn't really any better than the stuff we make with the short recipes, so we decided we're quite happy with the cottage cheese.

In bread making you've refined your formula down to the bare essentials.

Yes, we started with some fairly complicated things and a lot of ingredients. They were alright, the bread tasted very good but as we got involved with more and more activities in self-sufficiency such as drying fruit and making flour and winnowing and beating and grinding and so on, we decided each particular thing had to be simplified to the minimum so we could accommodate it in our timetable and the bread was one of the things that was taking too much time.

So we cut out ingredients that seemed to be superfluous and we finally did end up with only water and two other things.

You can use wheat or any other cereal which germinates easily. You can use, say soya beans, or millet or mung beans.

We take wheat, in this instance. We put it in water for 24-36 hours, depending on how warm the season is, and we sprout it. As soon as the little white shoots come it's quite soft. This we put in the blender, or you can put it through a meat grinder which is a bit more messy, but it eventually comes out as a sort of a mash. In the blender we pour in some molasses. I couldn't say how much, but till it gets pretty dark, and so you get a sort of soupy affair, which is mashed, germinated wheat with molasses. Of course that's too thin to bake, so we grind whatever flour we have. You can use Bunya nut flour, for instance, so we grind that freshly and add it to this soupy thing and it becomes a dough. You add and add until it's doughy. And that's it. Then you just mix it up and put it into oiled cake tins and then we put this into the woodstove. One essential is very slow baking, because it's a solid thing. There's no air, no rising. Although they're not very high loaves — about two or three inches — they need a lot of baking because it's solid dough.

It's a very slow heat and it also gets a bit of aroma of the wood fire. I'd say we leave it in there three or four hours even, turning them around. That's the end of the bread. The beauty of it is it keeps three weeks or even more. The stuff we had today at lunch has been down to Nimbin and back and it was baked the week before we left, so that must be going on three weeks. It begins to show a little mould around the edges but still it tastes like pumpernickel. I don't think it can be further simplified because if you leave out the wheat or the molasses, you're down to water.

The time factor is very important. The germinating takes no time — you put it in, wash it and leave it. Then, through the blender it takes maybe ten minutes for four loaves. The grinding of the wheat in the handmill is the only time-consuming thing. Once you've got that, assuming you buy your flour, you just drop it in and knead it around a bit and plonk it in. You can't do it any quicker than that.

Of course we do make chappatis at times as a change and also if we've run out of bread. We use Bunya flour, or our own ground soya beans, or wheat. Well, chappatis are well known, we just mix that with a bit of water and we have a special chappati plate we brought with us from India — a cast steel one. This makes chappatis in 30 seconds.

How else do you utilize the food you produce for your diet?

Do you mean what we have at each particular meal? Well, in the morning we have fruit, whatever happens to be around. Up till last week there was an abundance of figs, persimmons, guavas, bananas. What we usually do is to mash up persimmons and make a sort of a pudding out of it in the blender, then we cut up bananas and figs and other things into it and we eat that with a bit of cottage cheese and some nuts. We have Queensland nuts (Macadamia nuts). That's our breakfast.

At lunch time we eat raw vegetables, also what happens to be available. We go out, pick whatever there is — chokoes, turnips, carrots and radish. We pick quite a lot of herbs with it, fresh, just before we eat it. There might be borage, coriander, parsley, garlic and fennel, dill and so on. Then we eat our bread with some cottage cheese or some whey cheese, or an avocado if we happen to have it. Or from the night before there might be some beans left over. We make a mash out of that and spread it.

The evening meal is the only meal we cook and we cook as little as possible. Potatoes we cook and broad beans and soya beans. We cook some pumpkins, others we grate raw and mix with a little oil and garlic and make a salad out of it. That's our evening meal. Before that evening meal we usually have a big plate of comfrey, which we shred and put some nasturtium leaves in, and some nasturtium flowers. Then we pour some lemon juice over that which makes it quite easily edible, because comfrey is a bit rough, especially if you eat a rather big heap of it as we do. We find that's very palatable and we eat it every night without fail.

When we have lettuce we mix it with lettuce too. We mix some lettuce in with the comfrey.

We've seen the beautiful little Shetland ponies here at Shalom, eating the grass and making the place look like a big park.

Well, they do, they eat the grass down fairly closely, so it looks like a lawn, sometimes too much. When they do get it right down to bare earth a lot of weeds come up and we keep switching them from one paddock to another. They are part of our income. We breed the foals and train them and then sell them as pets for children, when they are about six months old. They have to keep them for

LAND OF PLENTY: Ilse with a giant cabbage grown at Shalom.

about another year before they can start riding them but usually people come with four and five-year-old children who grow up with them.

The Shetlands in return give you lots of manure.

Well, their manure of course isn't quite as "voluminous" as a big horse, but there are a lot of them around. They're very good company. They're very calm and even-tempered animals and it's very relaxing to have them. As you say they keep the grass down, they provide manure and they provide us with a small income because of the foals, so that's an ideal partnership. We're very happy having them around.

Have you got a routine that is repeated daily? Do you do anything at a particular time, do you go into the garden at such-and-such a time?

Not really. We don't have a set pattern. There are a few things that are set, like milking goats and gathering vegetables for certain meals and so on. The routine varies tremendously with the season of course. Certain projects have to be done, like building a shed or a fence. These are one-time jobs, and they are incorporated. Not at the same time, either, because in summer I wouldn't go out in the middle of the day into a very hot and sunny place when I can be slashing weeds underneath the pine trees where I'm in the shade. So in that respect, of course, our activities vary with the different times of the year, also with rain. When there's rainy weather I'll go under the house and I'll beat sacks of soya beans and get them ready for winnowing, or we'll cut up bananas for drying, we'll sort out food storage, or we'll do repairs to machinery. So it could rain for a week and we'd be on jobs like that. Then you get a lot of good weather and you do the jobs outside, the routine jobs like mowing, which has to be done continually, slashing of groundsel bush and lantana and so on, cultivation in the various areas where we grow crops of soya beans and gathering of mulch from neighbouring farms.

There are any number of jobs. We have them all in mind and we have lists of priority jobs to be done, but after a while you sort of get into the rhythm of your whole environment, into the cycle of nature. You feel quite at one with what goes on — light and darkness and wet and dry and all these things sort of guide you in what you should be doing.

Often I don't have to think about it, I just head out that way and I know that has got to be mown or there are nuts to be gathered or fruit to pick. When we get rather a glut of jobs then we do have them on an orderly list on a piece of paper and each one — Ilse and Jeffrey and I — has the jobs according to each one's capacity and interest and we get on with them and all the jobs which we do together, which need to be done by two people. We sort of determine a time, well, you know, when you've finished with your kitchen work and I've milked the goats and mown a couple of lawns then we'll get together and go out gathering these foods, because I've got to climb up in a tree say, and throw them down, or let pails full of fruit down. With the planting of beans, I'll make the rows and Ilse will go behind and drop the seeds in, getting mulch from a nearby farmer, and then Jeffrey will come with me and rake it up and I'll load it and so on.

There's always a continuity of jobs to be done. But on the other hand we've by now got into such a routine and usually we're on schedule so that if people, say, turn up here and we can sit for a day or two and talk with them and walk around . . .

LAND OF PLENTY: Gerd shoulders an 85lb bunch of Mons Marie bananas.

That's fortunate for us.

. . . then no harm is done.

So you see this as a sort of maintenance job now that the main establishment has been done in those nine years?

There are always added jobs. For instance we've planted maybe 14,000 or 15,000 trees, but there are still areas where small trees are growing and we have to replant because they died due to drought. New blocks that have gone into weed we plant again. As far as the layout of the place is concerned — that means the fencing off of cultivated areas, the areas where horses graze and where trees are planted, all this is set now and it is mainly a maintenance thing. Of course the more you build up the more maintenance you have, so you really don't reduce your work, it's just that the work is different from the building up.

This establishment required quite a lot of work and discipline also?

Yes, well it was a continuous effort because nature is fairly hard and we're encroaching on it so of course it tries to fight back. Sometimes you have to fight, but most of the time you can operate with it. When you get a big flood and everything gets washed down into the valley and there are piles of debris and fences and your crops are washed out, well then you've got to start again. We've found, although at times things looked rather hopeless and we had a lot of setbacks due to weather being too dry, too wet and so on, that by persevering and replanting and rebuilding you eventually get there. It does seem futile at times.

Was there a point where you could say, you know — "We're on top of it"?

Well, I'd say that in about the last three or four years we've found that we were beginning to handle the situation, whereas in the first three, four, five years there were always that many things undone and overgrown areas and unfenced areas around that it did seem as if we were struggling. We started having practically all our own food after about four years. But then there came a time when we had enough done, so that even when we had a setback we knew we could always handle it right away and get on to it and spend a week or two replanting and rebuilding.

Can we go into your motives, the two of you, for looking for a self-sufficient, simple type of life?

I suppose the motives line up with the motives of most people who find that the "civilized society" type of existence is not conducive to peace of mind and not conducive to perfect health, not conducive to ... happiness I suppose. And that by going to a more secluded and quiet place where you can live in natural and peaceful surroundings and grow your own food, you can come to a more orderly and happy existence. It's not everybody's way of life because it requires sacrifice by normal standards, inasmuch as giving up comforts, social contacts, foods you like and so on because you are restricted economically. You don't have the income anymore and you can't buy the things you used to buy. But if you feel that this sacrifice is worth it then ...

We felt that life would be much more satisfactory and we found that the ideas we had nine years ago have worked out, and so much that we are perfectly contented and to quite a degree self-sufficient.

It did involve, and it still involves, a great deal of hard physical work and constant application and, of course, discipline in addition to that. And also getting used to a routine which people in cities would call very monotonous and lonely. But that's the way we were made and we recognized that we were made for this kind of life before we ever started and this was our good fortune. You could easily make a choice on the strength of reading books or seeing other people do it but then you're not really made for it, you're only trying to copy and think this is the way. Then you could end up in a rather unhappy situation.

But our main motivation was the obvious, that we wanted to get away from polluted areas and artificial foods, and have the satisfaction of growing your own food from the soil you know and know what you're eating. And you can have it straight from the garden without any in-between. This is one of our main objects. And then also the economic side of it — we felt that whatever product we had, whether it was an engineering product or writing an article, or whatever we had to sell, we always sold at the lowest price because it had to be resold. If it were vegetables, or anything you produce, it's resold and resold again, so you get the lowest price because you're the producer. Then with the money you get out of that you buy articles which you need and you are again at the wrong end of the line because you're paying the dearest then because, wherever it came from, it's been padded out in the middle all the way, so you're getting the minimum and paying the maximum. We found by living a self-sufficient type of life, not only in food but in natural resources like wood and gravel and sand and all these sorts of things that our property provides, we short-circuited this middle-man affair, so we could balance our economic situation without much money being involved, spending or making.

Did you draw influences from any particular country, for instance Israel or Pakistan?

Yes, I think so. I wouldn't sort of pinpoint any particular time in our lives where it was a turning point where we said "Ah, this is it", but we had the good fortune that we weren't precipitated into this kind of life the way young people are now. It's become that untentable in towns that people have to get out without being really ready, not having enough money, not being old enough to have the proper vision and the experience perhaps. Whereas at the time we left, which is about 15 years ago, we had time to spare. We could make our plans. We could travel for a number of years to get, first of all the travelling bug (which grips a lot of people) out of our blood, at the same time look for an ideal location and, thirdly, learn from all the peoples we came into contact with, of their methods of life.

Doing this gradually, and at a maturer age, we assimilated a lot of this experience and put it to use here. As I said it's hard to pinpoint, but, for instance, Israel being one example, the kibbutz life, also growing things and subsisting on what you yourself can produce. Of course they are on a larger scale, our "Kibbutz" is very small, just being a family kibbutz and having temporary "members" throughout the year. But yet it probably has some traits of the original. Then living on this health ranch in Mexico where we learned things about diet and food combinations and so on. We were influenced by books we've read and people we've met.

Throughout the years this sort of accumulates and you can no longer say exactly what comes from what, but you feel yourself ripening towards something. As we distanced ourselves from the normal way of city life and the artificial type of life, we came nearer to the life we were heading for. It wasn't a sudden leap from one into another. The sudden shock is very upsetting to people and they often have to retrace their steps. We took it very easily and it blended in much more naturally and that's one reason why we've been in the same place and done the same thing for nine years and it looks very much as if we'll continue doing that. There seems to be no influence that we can at this stage determine.

Was it just climatic reasons which made you pick this area?

As far as Australia is concerned, we did decide Australia was the most suitable continent because of comparative political stability, climatic conditions and prices of land. Once we had decided on Australia it was a matter of going all around it and, although I'm sure there are other quite suitable places, Nambour struck us as we came north the first time as a particularly suitable area because it was already tropical enough — sub-tropical it is really — to grow tropical fruit, but it wasn't so tropical as to be a sort of all-the-year-round hot climate. We find the seasonal climate very good. We do get quite cold winter nights and the days during the winter are very pleasant.

In summer we get quite a lot of heat waves and rain. We have days around the 100 degrees F mark. We get 100, 102 and 103, but it only persists two or three days and then we get rainstorms after it to cool down. But we find going into the tropics, where you can really grow tropical fruit even better than here, doesn't give you the balance of the cooler time of the year and I think it is better for the body. It seems to feel that way, anyway, to have these changes, the same as from day to night. So we decided that this area seemed to be most suitable for our purpose and, after we'd gone around Australia, we came right back to Nambour and looked at properties in the area. We found this and it seemed to suit us.

How about your avocations. Can you find time to write stories and to read books at night?

Yes. In the winter particularly. It gets dark about six and light only at six again, so there's 12 hours and our sleep is reduced to some extent. We have time to read and write stories and we have a photographic darkroom where we do our own developing and printing for articles. Of course quite a lot of time in the house is taken up with food preparation, grinding and making cheese and making bread and roasting this and that. It does accumulate.

There are times of the year again where it's less and we can pursue hobbies of all kinds. Also there's time for complete relaxation or meditation. You have to keep some kind of balance and we've found, first of all by observing the imbalance in others, not realizing that we are guilty of the same imbalance, we've tried to bring physical, mental and spiritual aspects of our being into some relationship which produces, or should produce as an end result happiness.

We feel that this is the only criterion. There's no other judgement on what a person is or does, but if there's complete happiness — that means a lasting bliss as they call it in the scriptures and teachings — if that can be achieved, well then you've obviously succeeded in being a perfectly-balanced being. We try to aspire to that by not being excessively active, or working only, or becoming extremely fanatical about producing a certain thing at a certain time in a certain quantity, by doing a thing scientifically, or again, on the other hand, meditating say for hours and hours and very intently trying to get somewhere, or using our minds to produce an article or a book or solve a problem very overly concentrated, but rather finding some balance of physical work and mental activity and spiritual aspirations. We find the three as a triangle, with harmony as a binding force, seems to provide us with the answer.

This doesn't mean that this would be a solution for others. We can only work on ourselves. We feel the only valid path open to us is to work on ourselves and do the thing for ourselves so that we improve our own way, we increase our detachment, reduce our ego. We feel that that adds to the sum total of good in the Universe. This we feel is the most worthwhile contribution. Although it may seem rather egoistic, we feel this **is** a contribution, rather than try to go out and do things **to** others, rather to work on ourselves in this particular place, living what we believe in, doing exactly what we believe in, rather than going to tell. There are people who are made to tell. There are the prophets and teachers. They go out and teach, that's their function. It's a completely valid and necessary function. We are made differently. We are made to do our thing, work on our own evolution, our spiritual evolution.

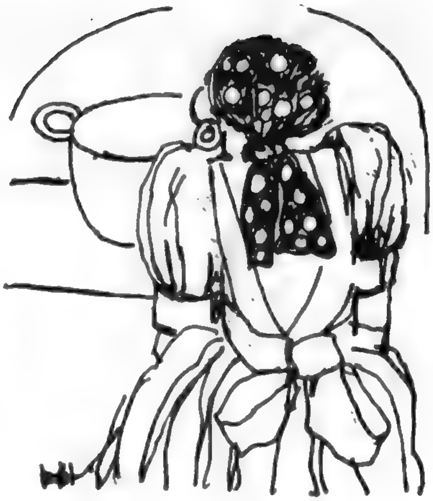
We carry on with that and try to do it as patiently as possible. We also suffer from the impatience and weaknesses that we are brought into this Universe with, but we try to be aware of them. The awareness, the consciousness all the time of what **is.** This helps you a great deal. As long as you're aware and conscious, even if you do stumble on the path you can always pick yourself up again and go on, becoming aware that it is an eternal path, it's not limited by our physical lifetime and that it goes on eternally. This gives you great comfort and increases your patience, not to have to get something done this minute or next week or next year even, because you've got any time. This helps you to **be.**

Just being is the ultimate, because just being means happiness. Not being somebody or something or wanting that, or having been, or going to be. These are all concepts that we've been taught are worthwhile, but it's only in a commercial sense that they are worthwhile. In a spiritual sense just being in this now means happiness.

A temple of peace, shared by all religions.

Cajun cookin'

By Julie of Trafalmadore Farm, NSW



Being a migrant from the Southern part of Amerika, I have to offer many a recipe used by the poor folk there — cheap, easy and oh so good!

My man and I are on the road to self-sufficiency, have our own chooks, grow our own organic veges, grind our own meal and flour and so on. So these recipes are suitable for city folk and hermits alike.

Some of these recipes are usual "Southern" dishes, others are strictly Cajun (pronounced ca jen, also spelt Cadian, cajan, cajin, derived from Acadian. The dictionary says: One of a people of mixed white, Indian and Negro ancestry in southwest Alabama and adjoining sections of Mississippi).

Cajun is a dying art of preparing Louisiana Acadian food: a Louisiana poor man's way of eating like a king.

WARNING: This food is usually very rich and filling.

But before I start, I would like to **stress** the evils of BAKING SODA and BAKING POWDER!! Do you realize how they rot your innards? DISGUSTING! Use eggs and honey as your leavening agents — they've been around a lot longer than soda and powder. Powder and soda were used in **place** of eggs and honey to begin with (not vice-versa)!

BASIC CORNBREAD

A quick bread — made in 35 minutes from start to finish. Good with any meal.

1 cup yellow corn meal
1 cup wholemeal flour
bit of wheat germ
2 slightly beaten eggs
¾ teaspoon salt
2 teaspoons honey
2 tablespoons polyunsaturated oil
1 cup milk

Warm oil in cast-iron skillet while mixing other ingredients in a bowl. Add mixture to oil in skillet until mixed evenly. (Don't get skillet too hot or the edges will cook too quickly, resulting in burned edges.)

Now stick the skillet in a 425 degrees F oven for 25 minutes (only takes 20 minutes if its a woodchip stove and its hot).

Variation No 1:
add 2 teaspoons molasses
use ½ cup rye
½ cup wholemeal
sprinkle cracked wheat on top (so nice!)

Now for a real treat. Variation No 2 (Yummy in my tummy cake).
use 4 teaspoons molasses
6 teaspoons honey
1 cup sultanas/raisins etc
duck eggs if available
1 generous teaspoon ground cloves
1 generous teaspoon ground ginger

Serve warm; top with butter and honey — or cold — spread with the butter and honey mixture previously mentioned in EG4 (page 38) — cut in slices. Delightful!

Please don't use aluminium cake tins. Invest in cast iron or ovenproof earthenware utensils.

COUS COUS ACADIAN STYLE

2 cups corn meal
1 ½ teaspoons salt
1 ½ cups milk or water
½ cup polyunsaturated oil

Mix it all together in a hot skillet with hot oil already in skillet. Let a crust form. Stir it up and take off the heat (if in cast iron skillet, if not lower heat and stir for 15 minutes). The cast iron retains the heat and should cook it without returning to heat — this varies with your pans and stoves.

Serve with milk and honey as a cereal, or with cane syrup (molasses) and crisp bacon. Good on cold mornings.

HUSH PUPPIES

Hush Puppies used to be thrown out to the dogs to hush them up! Good for people too. A must to serve with fish.

1 cup corn meal
1 beaten egg
2 teaspoons salt
1 cup boiling water (or hot milk)
bit of chopped onion (optional)
enough polyunsaturated oil to fry in

And ingredients slowly to water or milk until smooth, thick mush (add eggs last — after mixture has been cooled by other ingredients). Form into balls, roll in wholemeal flour, mush down almost flat, and fry.

NEW ORLEANS MORNING CALL DOUGHNUTS

This recipe calls for a loaf of frozen bread dough. We don't have a freezer, but sticking the dough (in a bowl covered with a teatowel) out on the verandah on a cold night, overnight, does the trick.

1 loaf frozen bread dough
1 large cake tin
enough polyunsaturated oil to deep fry

Take frozen bread from freezer or verandah and put under the cake tin. Allow 10 hours to rise. It will be HUGE!

Roll it out in plenty of flour, very thin. Cut in pieces about 1½ by 2½ inches and cover with slightly damp dishcloth for 30-45 minutes. Drop doughnuts 3 or 4 at a time into hot oil. When browned, drain. (Don't let the oil get too hot! It will catch on fire.)

This recipe originally called for icing sugar to be sprinkled over the doughnuts. But, as we all know, that sugar is a definite No-No — a honey glaze is just as lovely and much better for you.

HONEY GLAZE

½ cup honey
1 egg
bit of hot water to liking

Combine, brush on with pastry brush.

Now for the basis of every Cajun dish: The REAUX (also spelled Roux).

In your cast iron skillet:

Heat 1½ cups polyunsaturated oil. When hot add 2 cups wholemeal flour. Stir. When it starts to brown add another ½ cup flour. When flour starts to turn brown add another ½ cup flour. When flour starts to turn deep chocolate brown add 2 pods chopped garlic. Keep stirring until the colour of (dare we say it?) Coka Cola. Don't chicken out, you'll think it's going to burn, but hang in there!

Now add 2 chopped onions and 1 big capsicum, chopped, and 5 stalks of celery if you have it. Cook until these wilt.

The Reaux will make a weak chicken stock taste out of this world! When adding the Reaux to the broth, make sure that both are very hot and boil until thick. Add cayenne to taste.

CHICKEN GUMBO

Boil two chickens, season with salt and pepper. Cook until **just** done. Debone if desired. Add Reaux to stock and add another onion and chopped parsley before serving.

Serve over rice **always.** (Brown rice of course). Lasts for days, can be frozen. Always serve gumbos in a bowl.

Variations: **SEAFOOD GUMBO**

Boil any type of seafood (prawn and oyster is my favourite) — enough to do 3 quarts of water justice. Add the Reaux, onion and parsley. Serve with rice.

CHICKEN & OYSTER GUMBO

Delicious. Add the oysters last. Heat, serve over rice.

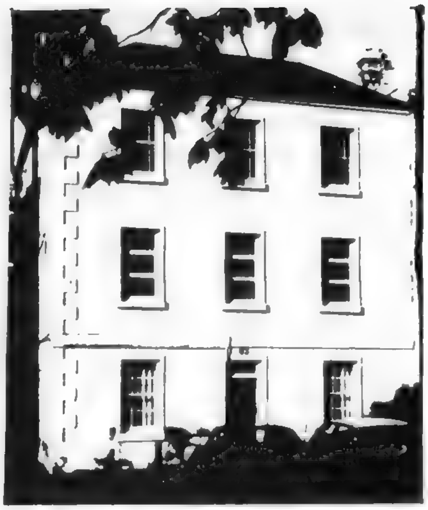
SHRIMP & OKRA GUMBO

Follow same idea. Add okra after you add the Reaux. Also add enough tomatoes to give it a hearty tomato flavour.

And so on and so on. Use anything. Sweet corn and okra gumbo is good too. Endless possibilities.

I was going to write more — but there's so many good recipes I don't know which to pick. So I'll just give you the name of the cookbook that is the best source for any Cajun or Southern Dish. It's called: **Talk About Good,** and is available from: **Service League of Lafayette, PO Box 52387, Oil Center Station, Lafayette, Louisiana, 70501, USA.** The price is about $US5 and the money aids community projects there.

Good vibes to all of you seeking the good life.



63 SALAMANCA PLACE HOBART

Built in 1834, this three-storey warehouse facing the "New Wharf" is the site of an exciting new community project for Hobart. Run by a co-operative, it will house a collection of galleries, craft shops, offices, studios, coffee shop and bookstore and The Learning Exchange.

A unique feature will be the Free Space — a large area available free of charge to anyone who books the event on a blackboard. There is also a meeting room for regular conferences.

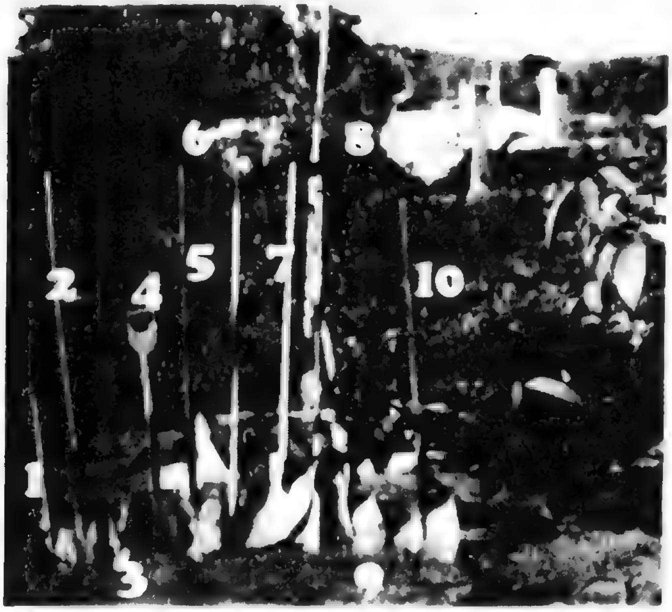
63 Salamanca Place should be open as EG6 goes to press.

Also in Hobart is Barb's Bazaar, run by Barb West, at 134 Elizabeth Street. Barb will sell any cottage crafts, pottery, jewellery, clothing and leatherwork on 15 per cent commission.

Ingham Health Foods & Craft Centre at 21 Herbert Street, Ingham, Queensland, is a place where you can find most of the good things that EARTH GARDEN is all about.

Liz, John and Mike sell sun-dried fruit and nuts and stone-ground flours and cereals and hope eventually to supply organically-grown fruit and vegetables. There's also pottery, wood carvings, pencil sketches, paintings, leatherwork, macrame, Indian clothes and home-made candles ... an outlet and incentive to local crafts people.

GARDEN TOOLS



2. Diggers

BY RICHARD BURTON

Most country auctions have lots of tools going very cheap, although you often have to pick up a bit of rubbish to get what you want. However, don't be falsely economical. Usually old tools are pretty worn and need new handles, and it's better to gradually tool up with good quality new tools.

Be very careful that you get the best quality — again, it's false economy to buy cheap, weak stuff. They just don't stand up to the work. Even a good shovel constantly used for all garden digging will only last three or four years before it's worn down. A worn down digging implement is quite worthless because it doesn't give you any depth.

If you're going to dig, dig properly. Otherwise you're only disturbing the soil and bringing weed seeds to the top (the disadvantage of digging) without getting any of the advantages — aeration, distribution of organic matter and increase of tilth.

These are the diggers which you may be able to pick out in the accompanying photograph.

1. A small shovel, with a pointed blade and two-foot handle. Often called a "trenching tool" — though we reckon it'd want to be a very small trench. An easily packed small spade for fireplace and latrine digging when camping. We find it very useful in restricted spaces — between plants, under trees, up in tight corners and especially for transplanting items too big for the hand trowel and too small for a proper spade.

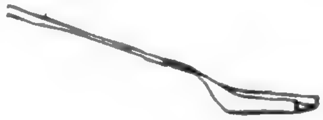
Also very useful for mixing small quantities of cement. You can get a similar tool from disposal stores with a blade that folds up for easy packing. We prefer the fixed blade since there's no moving parts to wear.

2. A long-handled shovel, with a narrow half-pointed blade.

One should have every major tool in both long and short-handled styles. Once you've got used to it you will generally use the long-handled variety, since it gives infinitely better leverage and will make your back last a bit longer.

Short-handles are useful in constricted spaces. But if your budget can only stand one — go for a long handle every time. The shovel 2 is one of many blade designs and can double as a shovel or a spade. Good also for digging post-holes and scooping irrigation channels between rows of vegetables. It has a bent blade, which gives it a greater capacity.

Another good shovel to get, which we're saving up for, is a trenching shovel. It looks like this:

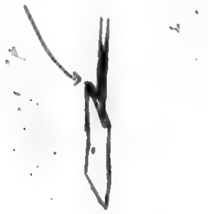


and they come in different widths. Excellent for making trenches of all sorts, to the size required and with neat edges.

Remember the difference between shovels and spades: a spade is strictly for digging earth over or digging up plants, a shovel is strictly for shovelling piles of material from one place to another. A shovel can double as a spade, although its bent blade will give you a scalloped digging edge which is less easy to handle.

But a spade is almost useless as a shovel, because the material just falls off the flat blade.

When buying spades and shovels, as well as looking for quality metal and husky construction, look for an "instep lip". Don't get a spade or shovel without this lip.



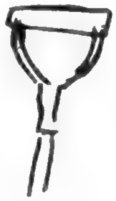
Otherwise you'll tear your boots to pieces and break the soles across the insteps by constant pressure on a knife-like edge. The lip also gives you more pressure area.

3. Is a small hand trowel. Most important for effective transplanting and also for filling pots and tins with potting mixture.

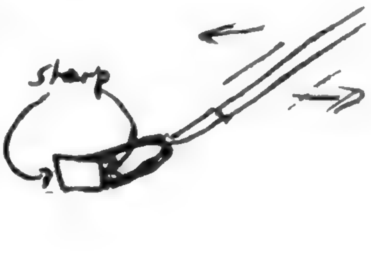
4. A short-handled spade.

5. A long-handled spade. We keep the blade of this one good and sharp, and the long handle is excellent as a piston for cutting compostable material down to suitable size. Also our main digger.

6. You can only just see the blade of this tool against the background.



It's a Dutch hoe, also called Scuffle Hoe, Push Hoe, Thrust Hoe. The idea is that both sides of the blade, fore and aft, are kept sharp and you use it on the surface like this:



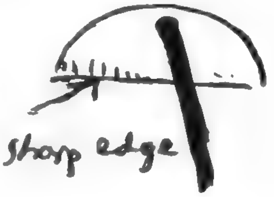
back and forth, so that the sharp edges cut weeds off at just below ground level — the blade tends to work its way into the soil.

7. Is our big aluminium shovel. We've had it three years, given it good use and it's worn well. It cost over $7.00 but has been tremendous for shovelling light materials (compost etc) — you get such a monstrous lot at one time. Also, in contrast to shovel 2, with its bent, semi-painted blade, this has a flat blade with a straight edge and holds its load by means of upturned edges.

This has made it a most useful tool for getting completely flat surfaces on paths etc, or pre floor-stone laying. Of course you can't use the straight edge on piles of stones, or even sand, very satisfactorily. Most people have especially admired it as a dry manure loading tool.

8. Is our specially-made hoe. A half-moon hoe, which operates the same as its near relation, the square-bladed hoe:

Both are used for weed cutting or light cultivation (turning surface soil for better aeration and water absorption) by means of a chopping motion. The word "hoe" comes from an old Teutonic Middle English word "houwe", which meant mattock, and the method of use is the same, except that the hoe is lighter and shorter and has a wider blade.



This half-moon is about 9 inches across and we had it made out of ¼-inch steel-plate and welded on to a ¾-inch pipe handle. It weighs a ton and is a beautiful example of the necessity of weight in chopping and bashing tools.

Commercial hoes are all so light that you have to work like blazes to batter them into the ground, and suffer the vibration each time it hits. With this heavy fellow all you have to do is lift it and let it drop — it does all the work itself.

Same principle with axes, sledge hammers, picks, mattocks. Let it swing and do the work itself. Much easier. With a big half-moon like ours one can also draw out excellent irrigation ditches between rows of vegetables. By using it upside down (as in the photo), you get a long, curved ditch between your plants, which leaves good hillocks for the root zones.

9. Is an ordinary short-handled, round-bladed, pointed shovel. Always get a good big one and forget about anything that's worn.

10. A long-handled No 9.

Hoes are good for opening seed drills or furrows or rows. Dig 'em in on a corner to the required depth and pull 'em along in a straight line — or curved line, or wiggly line, or whatever you want or can't help!

$ SAVE $

BY YVON CROSS.

While you are cooped up in the city dreaming of a little farm in the hills, put into action the following plan to save $1000 in a year. This money will enable you to place a deposit on that heavenly piece of earth and help make your dream a reality.

1. A percentage of your earnings must always be saved.

2. Go on a shoe-string budget. Don't spend any money on anything anymore — except maybe food and shelter. Make lists for groceries, clothing and luxuries that you think you need. With a fat red pencil cross out all items which can be done without or made at home.

3. Sell anything round the place that you don't need any more. Put an advertisement in the paper, or have a For Sale party, or cart the stuff off to the secondhand shop. If your hair hangs past your waist snip it off to shoulder length, sell it, and start growing it again. Sell your car and buy a bike for one, a tandem for two, or harness your bike to a rickshaw if you have a family.

4. Go primitive. Shed your clothes and your shoes. Wear a uniform or overalls to work. Wear your birthday suit or swimsuit round your dwelling. To decorate your bare feet, wear bells on your toes, or rings. At the junk jewellery counter you can buy 25 cent rings with adjustable bands. Slip them over your second toes. (PS. Don't wear them to bed. The scratch). In winter wear socks instead of slippers. Make a cosy poncho out of any old "army" blanket. Decorate it with patches and braid. You can still spread it on your bed at night.

5. Pets can earn their keep and a few dollars as well. You can breed anything from camels to carpet snakes. Go for something small and cheap which will multiply quickly, and your money with it. Try guinea pigs and white mice.

6. Enter all free competitions and contests on TV, in magazines, or at local shops. Some lucky devil has to win them and it may as well be you.

7. Go fishing. Walk, cycle or hitch-hike to the nearest wharf, sea, or river bank, and throw in a line. Even if you don't catch anything it's a relaxing occupation — unless you're hungry. If you are an amateur, check with other fishermen about the best times, best bait, and best places. Ask about crab and craypots. Don't bother with cleaning the fish, just bake it whole as the Aborigines do. When the fish is cooked the scales peel off easily. Make fish-head soup. Cover with water and simmer with onion and herbs. Grind their bones to make your fertilizer.

8. Patio gardens are pretty — pretty necessary for good health and good savings. Assemble an assortment of tins and pots (found at any old dump). Sow lettuce, bean sprouts, parsley, mint, tomatoes, egg plant, all your favourites. Don't pluck the whole lettuce, just take a few leaves as needed and it will keep on growing.

Bank this sum — it should be $10 or more — immediately every week or arrange with your place-of-work to bank it from your pay.

Earn the extra $10 per week by operating a cottage industry. There are so many things you can get going when you come home from your regular job — pottery, leatherwork, writing. Build billy-carts and doll's houses with reject timber. Use old magazines and newspapers to make papier-mache fruit bowls, pencil holders, vases for dried flowers.

the Tassajara Bread Book

By MICHAEL BODDY

Any book that opens out your mind, that shows you possibilities, that increases your respect for and appreciation of the world and the things in it, is worth buying ten times over; and the Tassajara Bread Book is all of this.

But what makes it worth buying twenty times over is the way that everything is taught to you in a practical no-nonsense manner, with pictures and simple instructions that make it possible to be a bread-maker from the moment you open the book and start to study it. High standards are given and expected; but they are not so high that they are unattainable.

I have been working closely with this book now for nearly a year. I came upon it quite by chance, the only copy in a large paperback depot; I'd heard about it from The Whole Earth Catalog, but that was all.

Once home with it, I found it became my constant reading for a week; and when I felt that I was intimate enough with the person who wrote it and the things he wrote, I started to bake. Since then I have had only four failures, and they were my fault.

Every week I bake the bread for the household, and we have enough over to hand out to droolers and enthusiasts who come from round about when they smell the ready bread just before it comes out of the oven

The essence of the book is the step-by-step introduction which teaches you how to make a basic and wholesome yeasted bread by the classic "sponge" method. A series of instructions and simple diagrams take you through the process; and if you follow the steps with care, you cannot go wrong.

The end product is a delight. Generally, home-made bread is heavy and hard work; but this bread is delicate and chewy and eminently satisfying both to adults and kids. My family eat nothing else when it's around.

From the preliminaries you can then advance through many different varieties of bread, to unyeasted loaves, to sourdough recipes, to all sorts of cakes and pancakes, energy bars and sweets, all based on the simple preliminaries that you have mastered.

The writer, Ed Brown, is constantly encouraging you to experiment, to vary the basics, to use ingredients that you never would have thought could be incorporated into loaves of bread like meal leftovers, fresh fruit, cheese, even soup! It's the best sort of cook book, because it is not only a set of blueprints, but also a map of discovery.

My copy is scribbled and scrawled all over with variations and comments as I've adapted it to our conditions and desires. But always in the background is that very solid base of understanding that Ed Brown gives you of the whys and wherefores and the way things work alone and together, a rare thing in a cookery book!

Our favourite is a wholemeal loaf made with rolled oats, wheatgerm, roasted sunflower seeds, buckwheat and sesame seeds, and sweetened for the yeast with honey and molasses. It also contains eggs and olive oil.

At the moment, while I am writing this (which may account for its rather jerky style), I am trying a variation of my own, based on Ed Brown's principles, a wholemeal bread made with rye flour, roasted soya flour, and molasses, together with the eggs, roasted sunflower seeds and buckwheat seeds that the family refuse to do without. The dough is at present rising slowly in the warm oven, and the smell is already attracting people in from the garden and the studio — and I haven't even baked it yet!

Bread baking, once you have the routine of it, does not take up much time. The actual work I have done on the bread this morning would amount to about an hour. The rest is up to the dough. You can leave it in between processes and have a beer, or write a book review.

I think the thing that has struck me most since I started making bread the Tassajara way is the number of people in the world who are starved of texture and wholesome taste, who are yearning for the natural qualities of our bread. They come round and eat it in large quantities without any extras, and they can feel it doing them good. Even we have discovered that we no longer seem to eat butter with our bread, or even jam. The bread itself carries the day, it becomes a food in itself, rather than the filler and stuffer and wiper-up of gravy that bread has become over the years.

The bread book is a summary of all the recipes that have been used in the bakery at the Tassajara Zen cente in California, the first Buddist monastery in the United States. The recipes are all used in the kitchens of the monastery, and reflect the simple life of the monks. Thousands of tourists come in season and take away the bread in car-loads. I don't blame them.

Ed Brown was one of the monks who worked in the kitchen of Tassajara for a while. Whether you agree or not with what he has done, or his philosophy, you'll find that when he comes to the actual baking he is level-headed and expert, and the obvious sympathy and friendliness he displays can carry you through a few rough spots in the kitchen.

My loaf has risen. It's a far cry from my famous bread recipe in EG 3, which by the standards of Tassajara was very amateurish and heavy-handed. Buy this book; work with it; explore it; let your mind expand with it; let it work on you. You'll never regret it if you do the right thing by it; and your friends and family won't either, when they break **your** bread with you.

The Tassajara Bread Book, Edward Espe Brown, Shambala, London, 1971, 146pp. $3.30. Our copy from Cambridge University Press (Australia)

natural care

"I wonder how many people eat natural foods themselves but open a can for pooch?"

This question was posed in a recent letter from Jan and Isabel Hartmann, who breed blue-merle Collie dogs at the Lilaglen Collie Kennels at Birdwood in South Australia.

We started thinking ... Disease is almost unknown in animals in the wild. They seem to be able to look after themselves.

But the domestic breeds which are derived from this same stock are beset with many illnesses.

That supreme animal we call man has over-domesticated, artificially reared and chemically treated them to such an extent that many animals just can't fend for themselves anymore.

The way some people keep dogs and cats penned up in small backyards or even in city flats isn't natural anyway ... in fact it's downright cruel. Even worse, are the 'factory-farming' methods in which big business agriculture cages chickens, injects cows and confines pigs and calves to turn them into economic meat-producing units.

There must be another way, we thought. And there is. It's called Natural Rearing, and is the method of animal care advocated by a remarkable woman called Juliette de Bairacli Levy.

Natural Rearing attempts to reproduce as closely as possible the situation into which nature places our animal friends.

J. de B. L. is the author of several books, particularly Herbal Handbook for Farm and Stable, The Complete Herbal Book for the Dog and Herbal Handbook for Everyone.

The books sum up her search for natural remedies and treatments of animals collected on her travels since 1947 in North America, Mexico, Spain, North Africa, Israel and Turkey.

Like Paraclesus, she learned many herbal remedies first-hand from peasants and gypsies.

She once cured 1,000 pedigreed Swaledale sheep which had been condemned as incurable following the 'Great Snow' in England in 1947. At one stage she kept 15 Afghan hounds, some of which became dog show prize-winners.

Like the gypsies, she would never feed animals anything she would not eat herself and often mentions the fact that she gave her children the same foods and cures.

She was encouraged by Professor Edmond Bordeaux Szekely, a Hungarian doctor who started the Rancho la Puerta in Mexico, and by Sir Albert Howard, the acknowledged 'father' of organic farming methods.

Her style is simple, lucid and very direct, as in this example: "Businessmen who have never owned an animal, fatten like breeding toads upon the ailments of farm stock which need not know sickness at all if they had daily access to the herbs of the fields.

"The true farmer should cultivate his own medicines in his own fields, and he should not consider himself as being a farmer if he has to resort to outside help for keeping his animals in health, and healing them when in sickness".

She suggests that farmers lay down medicinal herbs in pastures, along fences and hedges and around trees where animals graze. Comfrey, garlic and kale are ideal for this.

Herbs in fact are the whole basis for her Natural Rearing methods. They can be given raw in handfuls, finely cut up and mixed with a mash of bran and molasses, or brews can be made.

In Herbal Handbook for Farm and Stable, the doses are explicit: "The general dose for all herbs is: one heaped handful of herb, leaf, seed, flower, root, or bark brewed in one pint of water (preferably spring or well water).

"General dosage for the animals is: Sheep and goats one pint of brew daily, given in cupfuls morning and night; cattle and horses a quart of brew in pint doses morning and night".

Among the dozens of herbs prescribed are common ivy, maidenhair, mint, rose, sage, rhubarb, orchids, comfrey, and many uses of garlic, her favourite cure-all.

Included is the Australian Blue Gum eucalyptus:

"Use: Treatment of all fevers, including malaria. All pulmonary ailments, including tuberculosis and pneumonia. Inflammation of the female organs and bladder and gonorrhoea. Externally a valuable antiseptic and disinfectant without injuring any tissues. A valuable local application in cancers. Also as an inhalant in the treatment of diphtheria, asthma and all bronchial ailments. The dried and finely powdered leaves make a valuable insecticide when dusted into the hair. The oil, one teaspoon to half a pint of warm water, rubbed well into the skin, is a powerful insect repellant".

The book contains sections on the preparation of medicinal herbs, a guide, herb by herb, with the assets, cures and uses of each. There are chapters for sheep, cows, goats, horses, sheepdogs and poultry.

The Complete Herbal Book for the Dog might be described as a kind of Canine Bible. This is J. de B. L's attitude to canned meat: "This is unnatural food and causes overeating and bloating. Nature never taught the dog either to cook or to use a can-opener!

"How can any thinking person expect to keep an animal really healthy on preserved food from a tin or bottle? The popularity of such food, supported by large-scale and clever advertising, in my opinion is one reason for the extraordinary increase and variety in canine disease today, when it has become quite usual to feed dogs on such totally unnatural fare".

Dogs are natural meat-eaters and like about 75 per cent meat in their diet, she says. The meat should be raw and not hard frozen. Dogs should be given limited amounts of entrails of beef, chicken and fish, green herbage, root vegetables and silage, whole-grain cereals and sweet brook waters.

A little bran should supply roughage — about a tablespoon a day — sprinkled over the meat feed for each dog. No adult dog should be fed before midday. Each dog should have one meatless day and one fast day following it each week.

A dog in the wild, having killed his prey, will afterwards eat the intestines and stomach first, to obtain a variety of vegetable matter and herbs.

Juliette de Bairacli Levy also has a guide for we human animals in her Herbal Handbook for Everyone, which contains information on the gathering, preparation and preservation of herbs, herbs in the garden and cosmetic uses for herbs.

The three books are published by Faber and Faber Ltd. They are: Herbal Handbook for Farm and Stable, London 1952, 274 pp.

The Complete Herbal Book for the Dog, London, 1963 (new edition), 208 pp.

Herbal Handbook for Everyone, London, 1966.

* * *

In the following pages are some hints on natural animal rearing sent to us by readers which may be able to help you. Let's know of any that you are using which may help others.

Heather's Herbs

My German Shepherd dog Griffin eats borage (which is beginning to take over the veg-herb patch) and it seems to help with tapeworms: I haven't read this about borage anywhere. Both our dogs — the other is a little fox terrier mongrel, Sasha — browse periodically throughout the herbs.

Griffin is kept on the chain for a lot of the time (because I'm at school and there is a $40 fine for straying German Shepherds, how ridiculous!) and we have started putting needles from our pinus patella (too acid for the garden; takes ages to rot down) around her kennel.

This makes it much easier to clean up and should also help the garden. We have a dog trench as well as a compost trench. Another use for comfrey ointment is to help beat fly bites in summer by putting it on dogs' ears. I also infuse rue in water and put it round the kennel to help discourage flies.

— Cheers, Heather Wale, Mt Kuring-gai, NSW.

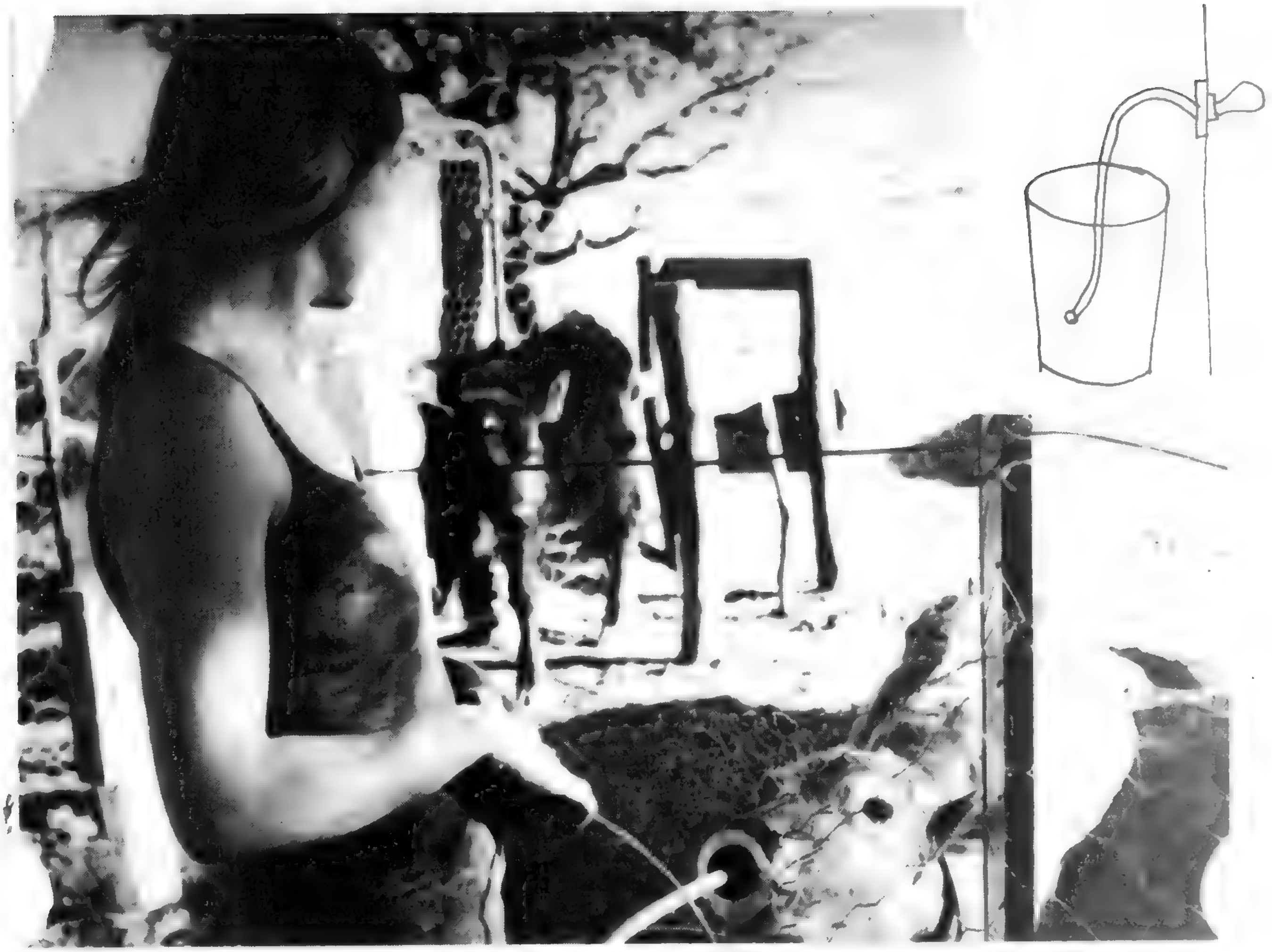
DOG BISCUITS

Egg shells crushed finely (vitamiser is best).

Any ground grains.

Mix with water, spread on well-oiled tray. Sprinkle oil on top. Cook for about 40 minutes. Cut or break into small pieces. These biscuits can be made either hard or soft, depending on the amount of water used.

— Mrs Marjorie Spear, Kuranda, Queensland.



"We raised them on goats milk, seeing we had so much," writes Kevin Flanagan of Downside, NSW, about his two calves, Boofy and Boyo.

"We bought them at the saleyard, a few days old and real cheap," Kevin continues.

"A bloke down the road marked them and charged us two bottles of beer. When we took the beer up, he opened them and shared the treat and then gave us a bucket of peaches — so only the calves lost!"

The photo shows Libby feeding goats milk to Boyo (Boofy is in the background), using a special feeder built by Kevin from a plastic tube, a large washer, a teat and a bucket.

Kevin suggests that the calves be fed through a gate or a fence (as in the photo). "The little buggers will push you over otherwise," he says.

GOAT NOTES

In your articles on goats (EG3) you illustrated how to milk a goat. That was a godsend to us. Stan arrived home one day, right on milking time, with a milking goat, Bonnie. I had never even seen the business end of a dairy animal before, and, with your magazine on the ground beside me, I successfully milked her. Thank you so much for that article.

We now have a small flock and we have found an easier way to trim their hooves. Using a good pair of garden pruning secateurs, and a pocketful of dried apples, we go up to our goat while it is sitting down. Gently one of us rolls her over so we can reach her toes. I usually hold their head in my lap and pet them while Stan trims their nails. Usually they go to sleep and don't even get up when you've finished! And the number of stones that lodge under their nails! Every goat we have, had over-long nails and three had pea sized stones lodged under overgrown nails.

Also, once a week, we have sardines in oil, or similar fish, and give our goats about one tablespoon each. It's an acquired taste for goats — you may have to sprinkle it on fruit leaves at milking time. Within a week the nails have a gloss on them, and the coat seems to glisten more. Cold winters don't worry them and they get phosphorous, etc, not in the grasses.

— MRS R. DARK,
Inverell,
New South Wales.

Healthy Horses

—by David & Judy Blackall

Horses have been faithful and loyal companions to man — enduring, intelligent and trustworthy. The reliability and goodness of the horse arises repeatedly in legends of mysticism and fantasy of centuries ago, from the wild, wild west and tales of bushrangers.

Having a horse grazing in your back paddock gives you a warm feeling ... However, some basic knowledge of the genus equus is necessary to give him the happiness and health he deserves.

No matter how immune to sickness your pony or horse might be, he is constantly susceptible to bumps and bruises. Lameness often results, and it is said: "A horse is only as good as the four legs he stands upon".

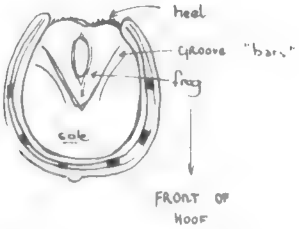
You must note the protruding points which are more vulnerable to injury. Particular care should be taken to ensure these are not knocked, especially when riding through gateways and stalls.

The hoof is probably the most vital part of a horse. If the hoof is in any way damaged, the horse is virtually useless, unless the damage can be healed. Therefore hoof-care as an everyday practice should be as familiar as feeding.

The sole on the underside of the hoof is concave and should be firm, not spongy. Never cut or interfere with this area.

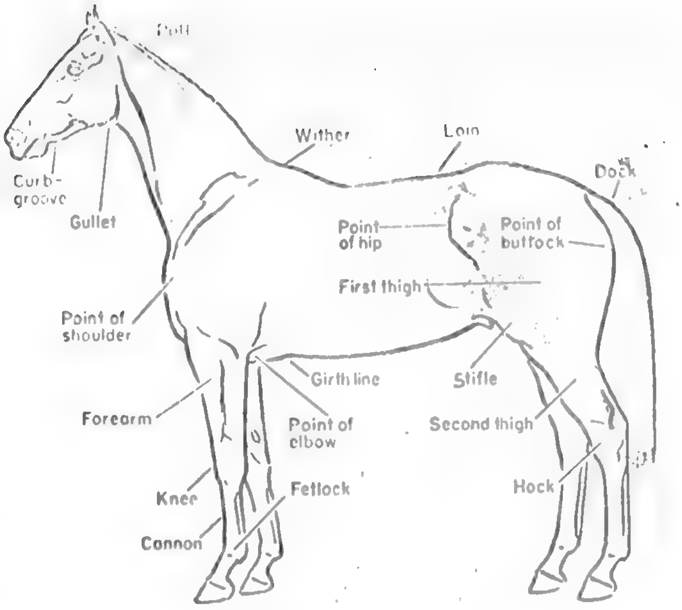
The heel normally touches the ground first with each step; the jarring of the step is absorbed first by the elasticity of the fetlock joint above the hoof. But the main shock of the step is taken by the expansion and contraction of the heel, and the frog, or the underside of the hoof.

You may have noticed that a horse shoe is not nailed towards the back of the hoof — it would inhibit the natural expansion and contraction of the horse's 'shock-absorbers'.



From the diagram, or by examining a hoof, you will see the deep areas either side of the frog. These grooves ('bars') are where the expansion is taken up. The heel also expands outwards on either side of the hoof when contact occurs with the ground.

The underside of the hoof must be kept free of dirt, manure and stones, so that the heel and frog may expand without interference. The hooves should be cleaned regularly, particularly when the horse is shod. Stones will also bruise the delicate frog, which is much softer than the sole or wall. The frog bears the weight, prevents concussion and slipping, and expands with the heel each time the hoof touches the ground, by bulging outwards.



POINTS OF THE HORSE

The hoof grows like fingernails, from the top downwards. The area from which it grows is called the coronary arch, and is protected by a cell-like skin, which prevents the hoof from drying. Rasping the hoof will abrade this skin, and the hoof will dry; therefore it should never be rasped. The wall is thickest at the toe and thinnest at the heel to allow for elasticity.

The horse's hooves should have a definite, neat shape side on, for good balance and efficient shock absorption. One can judge the proper size of a hoof by a ratio analysis of lengths of the various parts.

Because the hoof is continually growing, shape can be maintained by trimming with large secateurs. We invested in a set of special hoof clippers, and have found them well worth it, for the many times we have trimmed Judy's mare's hooves.

Cleaning out hoof. Note under-structure.

The hoof grows harder and more rapidly during the summer.

With regular hoof trimming, cracks should disappear. Frequent exercise with riding makes trimming automatic and completely natural. Riding also checks the underneath growth of the sole.

Horses should be shod whenever riding on hard surfaces (bitumen, gravel or dirt roads) is regular. The hoof walls grow about ¼-inch each month, so re-shoeing is needed every month or two. It varies with different horses.

It is not necessary for a horse to be shod if riding is restricted to paddocks and stock work. If the Blacksmith cuts the hoof back so that the white under-hoof is exposed, don't take your horse to him again!

Hooves often dry out if a horse has been worked and washed continually. A dressing of mutton-fat and stockholme tar in equal parts, making about one gallon, combined with ½ cup of kerosene, can be applied with a large paint brush on the hoof up to the hair and inside on the sole and frog.

Horses are susceptible to leg injuries, especially before they are two years old. But with care they can be nursed back to health.

In the case of an injured tendon you will notice swelling low down in the leg between the knee and hoof at the back of the leg (Human tendons are in a similar position at the back of the heel).

In the earliest stages of injured tendons you must keep circulation going and inflammation down. This is achieved by applying alternatively hot and cold sponges, until swelling goes. Then bandage and rest is essential.

Windgalls — an inflammation of the tendon sheaf — occur due to hard work, shock and tiredness to the leg, and especially when the horse has not been ridden for a while.

If a horse is fed too much good food, suddenly and in great quantity, or if he drinks too much water following hard work he may founder. This is a swelling of the area immediately above the hoof. It gets very hot and the horse will obviously be suffering. The best treatment is cold water and rest. If over-feeding was the cause, reduce the horse's food intake, by keeping him (or her) confined and on a ration of chaff (no grain).

Occasionally your horse may develop girth galls — sores where the girth of the saddle goes round the belly. The galls are formed by continued rubbing of the skin beneath the girth. It will frequently happen in overweight horses or those which haven't been ridden very often with a saddle.

The best treatment is to bathe the area with very salty, warm water to harden the skin. The girth which caused the sores should be softened with a leather dressing. Before riding and immediately after saddling, lift the front legs up, one at a time, high in front of the horse. This action pulls the loose skin from under the girth.

David treats Sphinx for windgalls. 1. Inspecting swollen area of tendon, just above fetlock joint. 2. Hosing with cold water to reduce inflammation (ten minutes each leg). 3. Bandaging from fetlock joint to just below knee. Cotton wool against bone at front.

The First New Zealand Whole Earth Catalogue

Good things are going on in New Zealand. You can read all about them in The First New Zealand Whole Earth Catalogue — one of the good things currently coming out of that country.

New Zealanders have a reputation for initiative and doing things for themselves. We saw this recently in the Government's strong and positive opposition to the French nuclear tests at Mururoa atoll.

This strong independent streak is evident again in the fact that New Zealand had a Whole Earth before anyone in Australia could find the resources or discipline necessary to do so.

In this case the initiative came from publisher Alister Taylor, who successfully launced the Little Red Schoolbook and Tim Shadbolt's bestseller Bullshit and Jellybeans. He was able to get together the editors and contributors needed for the project.

To properly evaluate the First New Zealand Whole Earth Catalogue we must compare it with the earlier versions of Stewart Brand's American brand of Whole Earth Catalog. This was the original and made its name by opening up completely new concepts simply by lumping them together in one work.

The new book has had the benefit of being able to take the earlier catalogs into account and to build on them. We would say it is a more useful tool than the WEC. Subjects are more thoroughly covered, not just listed or reviewed. Sources are obviously local and more up to date.

The NZWEC is well-designed, visually attractive and its layout is easy to follow. That said we should point out a similarity between the two works — yes, the glued sections of both quickly fall apart, a reflection on the binder, but perhaps a tribute to the books being well-thumbed.

Let's take a closer look. There are 256 pages in a slightly larger format than the WEC. This is divided into ten sections — Survival, Communications, Learning, Shelter, Moving Around, Ecology, Resources, Ways of Life, Tools and Material and Organisation.

The sections take in a great deal of material, with information on tenancy and eviction, the law, how to know your rights and use them, fringe medicine, children, free schools, food co-ops, play centres, bushwalking, recycling, wildlife, backpacking and ecology.

The shelter section is comprehensive, covering caves, domes, cob, pise, adobe bricks, restoring old houses, ferro-cement and railway carriage homes. Communications has the clearest instructions on starting your own magazine, printing, distributing and running a bookshop that we've seen.

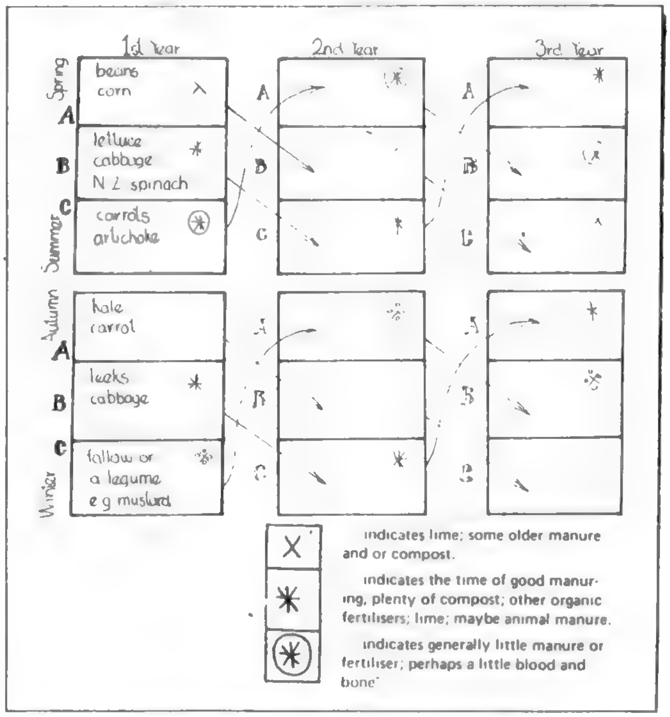
There's quite a few 'how-tos' along the way, like making Haurachis (Mexican rubber tyre sandals), a supplejack crayfish (lobster) pot, how to fix your transistor radio, lost wax casting, repairing a leaking cistern. Practical stuff.

Ways of life will introduce most Australians to James K. Baxter, a New Zealander they may know as a poet and writer.

Baxter, who died last year, shines through here as the founder of the Jerusalem Commune and a great fighter for the Maoris and their ways.

In Resources, the Growing Things sub-section really appealed to us. Here are plans for starting a real Kiwi organic garden with ten vegetables — Jerusalem artichoke, endive, kale, leeks, cabbage, New Zealand spinach, carrots, beans, corn and lettuce and one herb, parsley.

A chart shows suggestions for rotating the crops and feeding the soil.


1st Year
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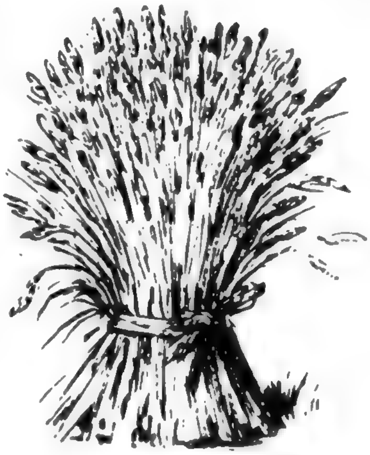
e g mustard
indicates lime; some older manure and or compost.
indicates the time of good manuring, plenty of compost; other organic fertilisers; lime; maybe animal manure.
indicates generally little manure or fertiliser; perhaps a little blood and bone

We agree with the editors: "The best way to understand what this book is trying to do is to read it and let the ideas soak in. Go back later and read parts you've missed: you can't absorb more than a bit at a time."

The First New Zealand Whole Earth Catalogue is an ideas book, a catalogue of techniques and resources.

It sells for $4.95 and is available in New Zealand from Alister Taylor Publishing Ltd, Box 10-292 Wellington, New Zealand (194 Sydney Street West) and in Australia from Seekers Bookstores, 1215 Main Road, Eltham, Victoria 3095. Add 25 cents for mail orders.

earth garden's key



NATURAL GRAINS

David and Helen Williams tell us that supplies of their Biodynamically grown wheat and rye will be ready for delivery in mid-December. Orders should be sent to them at: "Demeter", Breeza, NSW, 2418 by the end of October.

Prices, freight on receipt: Wheat, 180lb bags — $7. More than 12 bags (one ton) — $6 per bag.

Rye, 160lb bag — $6.

* * *

Organically grown wheat is available at $7 the three-bushel bag (about 180lbs) from Brian E. Morton, "Willaring", Private Bag 103, Stawell, Victoria, 3380.

Hulled oats can also be bought in three-bushel bags at $5 the bag. Send cash with order and add freight costs.

* * *

"For the last three years we have been using blood and bone as a fertilizer," says Mr T. R. Wilcox of his organically grown wheat. The price is 7 cents per lb, plus freight and packing.

The address: "Sylvania", Eugowra Road, Canowindra, NSW, 2804. Mr Wilcox is also looking for a stone grinder — one with at least a ton stone!

* * *

Don't forget the magic miller, Milan Posavec, who supplies the lovely people at Feedwell Foundry with their vital raw materials. Milan already has his granite stone grinders. He delivers his stone-ground wholemeal and ryemeal free within a 30 mile radius of the Melbourne GPO.

Prices: wholemeal, 50lbs (minimum) $5, plus rail freight; ryemeal, 50lbs (minimum) $6, plus freight. The address: Block 11, Railway Road, Epping, Victoria, 3076.

ORGANIC FOOD

The Organic Growers Association of New South Wales is a group of farmers and consumers interested in the quality of the food they produce and eat.

Members work to restore the fertility and natural balance of the soil, removing the need to use pesticides or fertilisers of a poisonous nature.

Visitors are welcome at the Association's meeting on the first Wednesday of each month at Leigh Memorial Church Hall, rear 119 Macquarie Street, Parramatta at 8 pm.

For further information, contact the Hon Secretary, Josephine Richardson, The Organic Growers' Association of NSW, "Sahara Farm", Kenthurst, NSW, 2154.

CITY OUTLETS

PERTH: Mother Nature, Shop 1, The Crescent Shopping Centre, Midland, WA Organic fruit and vegetables in season.

ADELAIDE: Fricker's Food Co, Adelaide Market.

MELBOURNE: Bruce Standish, 723 Glenhuntly Road, Caulfield.

QOL Whole Foods, 322 Chapel Street, Prahran.

Angelo D'Agostino, 601 Station Road, Box Hill.

SYDNEY: Hygienic Food Supplies Pty Ltd, 97-99 Ryedale Road, West Ryde. Tel: 807 1855.

Phoebe's Health Shoppe, Five Ways, Paddington.

Swiss Health Centre, 375 Victoria Avenue, Chatswood.

BRISBANE: Wholefoods Co-operative, 451 Milton Road, Auchenflower. Stocks include organic grain and grain products, natural sun-dried fruits, organic nuts and all the essentials of a vegetarian diet. Bulk ordering for co-ops in Queensland and northern NSW areas. Send stamp for price list.

The Alternative Community Telephone — ACT — is now located at Glenfield Farm, Casula. The new number is: (Sydney) 602 8095.

The same ground rules apply as they did previously: If you want to know, ask. If you want people to know, tell ACT.

"We now offer a full time free telephone service, providing addresses, phone numbers and information on such areas as communes and communal living, organic farming, food co-ops, crafts, dome building, enviroment, sexual liberation, natural health, peace, single parents and current activities of alternative groups and liberation movements around Sydney," says Glenfield's latest leaflet.

EATING OUT

Astro Macrobiotic Foods, run by Hans Hoeneveld, has opened up at 455 Milton Road, Auchenflower in Brisbane, just one door away from Wholefoods Co-Op.

We dropped in and enjoyed a delicious soup there on the second day of Astro's operation. Salads are served during the day, Friday to Monday, with hot meals in the evening. Payment is by donation.

Hans is always ready to help with practical information on health, herbs and organic gardening and pot plants of every variety are supplied to order. He is still baking his popular "spring rolls", cakes and biscuits.

COOLANGATTA: The Last Whole Earth Restaurant, Pacific Arcade, Griffith Street, Coolangatta. Tuesday to Sunday from 5 pm.

PERTH: Scoffs Vegetarian Restaurant, 500 Stirling Highway, Cottesloe. Wednesday to Sunday. Dinner from 6.30 pm.

ADELAIDE: Annie's Kitchen, Main Road, Crafers.

Mary's Health Food and Juices, 177 Glen Osmond Road, Frewville.

MELBOURNE: Naytura, 24 Centre Place and 300 Little Collins Street.

Shakahari, 329 Lygon Street, Carlton.

Food For Thought, Chapel Street, South Yarra.

The Slim Inn, off Collins Street.

Feedwell Foundry, 120 Greville Street, Prahran.

SYDNEY: Bloom's Health Foods, 400 George Street.

The Whole Meal, Angel Arcade, off Pitt Street.

The Natural Food Centre, 150 Liverpool Street, Darlinghurst.

True Health Aids, 443 George Street.

Two Little Fishes, Evans and Mansfield Streets, Balmain.

The Zen Inn, 288 Oxford Street, Bondi Junction.

Carbon Cycle, 260 Military Road, Neutral Bay.

O Fung, 26 Glebe Point Road, Glebe.

Street Farm, 30 Cronulla Street, Cronulla. Tuesday to Sunday, 6.15-11 pm. Weekend lunches.

earth people write:

Dear Irene and Keith,

Three years ago with my wonderful wife and three little daughters I left the city, my good job and went bush. We purchased four acres of blackberries and a little condemned house at Main Ridge on the mornington Peninsula.

With help from friends we cleared it and turned it into a bit of heaven. A new house with a beautiful garden. (Lived in the condemned house for 18 months).

We have an endless supply of home-grown organic vegetables and berry fruits. My wife milks two goats and keeps fowls.

I work in the district gardening, feeding cattle, farm work etc. Enjoy every minute working outside and making a good income.

Yours sincerely, Keith Butler, Main Ridge, Victoria.

Dear EG People,

It is just 20 years since we "escaped". There wasn't much "escaping" going on that year. If I remember correctly Venetian blinds were the big thing. Housewives were going to work to put them throughout their houses.

There wasn't much "escape" literature either. My own bible was a little booklet "5 acres and independence" written by an American during the Depression. But the deciding factor for me was a sentence in The Cherry Tree by Adrian Bell. It read as follows:—

"Money lust, luxury lust, and the other ingredients of ambition fail one late or soon. Surely it were better, rather than serve a life-sentence to the machine of modern scuffle, to live in a hole in a rock on lentil porridge, that one might save one's soul alive in looking at the view. Since life offers no second chances, the adventure of a morning's walk over familiar fields is not lightly to be foregone".

Our first place was 22 acres of poverty-stricken ti-tree scrub. We built ourselves a house of splayed weather-boards. After 12 years of jolly hard work we had improved it to the point where we were able to sell it at a nice little profit and buy 80 acres up here. This is a beautiful little valley tucked into the Wattagan Range. We have rain forest vegetation here, that means tree-ferns and staghorns, native clematis along the creek, native daphne and native frangipanni.

I suppose the biggest problem in the gardening department is keeping the parrots and Satin birds at bay long enough to collect some of our own fruit. I have had a shot at just about everything, goat keeping, soap making, geese keeping, market gardening. There are advantages and disadvantages to all of them. One thing we have never known in that time is boredom.

With the crazy way land prices are spiralling, I feel sorry for anyone wanting to get away from the rat race of city life, but for the person who is able to distinguish between **wants** and **needs** and is prepared TO WORK HARD, go if you get the chance. A little faith in providence is a big help.

Generally speaking it is a waste of time yearning for "a stone house by the creek" — they are few and far between. By all means try to buy some ground with a creek, but be prepared for the fact that the house is almost certainly bound to be dreadful.

I am enclosing some hints which someone might find useful. Also might I put in a word for pigs. They are a worthwhile addition to any household.

In closing, every good wish for the future. Earth Garden is beaut. Try to survive without the advts.

Regards, J. M. Fitzpatrick, Martinsville, NSW.

Dear Keith and Irene,

I was interested in Ed's comments (EG 4 page 8) concerning income tax refunds. Ed would be cheating himself and not the Government by making sufficient tax deductible donations to reduce his income to the non-taxable level. He would obtain a refund of only part of the amount paid as donations. That part would be arrived at by applying his particular rate of tax to the donations paid. On lower levels of income the rate would be as low as ten cents in the dollar, gradually increasing as the total income increases until the maximum rate of 67 cents in the dollar is reached at $40,000!

By coincidence, in a particular year Ed may have received a refund approximately equal to the amount spent on donations, but this could happen for a number of reasons. The most likely would be that he may have worked for part only of the year and therefore would have been entitled to some refund quite apart from any donations made.

You may care to publish the relevant part of this letter lest others be influenced to make the same mistake.

Best wishes with your good work, Allan K. Rost (chartered accountant), Sydney, NSW.

Hello People,

I hope that letters of praise and criticism will give way to letters containing helpful hints and suggestions and stories of encouragement. To write a critical letter is a certain way to see it printed, but to write a helpful letter and have it printed is much more beneficial to the Earth movement as a whole, and more rewarding for the writer.

Let us not take sides, or break up into sects, which is a favourite past-time of the "straights" in the society we have renounced.

I write this because, from reading the "letters" sections of EG2-5, it seems as though an argument is brewing over whether humans should be "Vegans", "Vegetarians", "Omnivores", or what have you.

We are not Earth People (I use/suggest this name for all who seek to come closer to the Earth and Earthy things), because of what we eat, but because of something else, inside us, something possibly none can write down.

So let us not force our trip on everyone else, or we may as well stay within straight society.

Let the vegan link arms with he who eats steak each day, let the snail-crusher join hands with he who would save all insects, and all dance for joy in discovery of the Earth in this Jet-Space-Atomic-Electronic-Computer-Consumer Age. Tolerance, not understanding, is the word that can save the world.

Keith & Irene, I echo your hope that EG will come to be a meeting place in words for Earth People. For a movement to grow stronger it must have communication between its members. It would be good if EG became that communication.

I would like to read more about group land purchasing, and any successful cases. I have kicked this around for a couple of years, but never found any active support. For most of us I think it will be the only way.

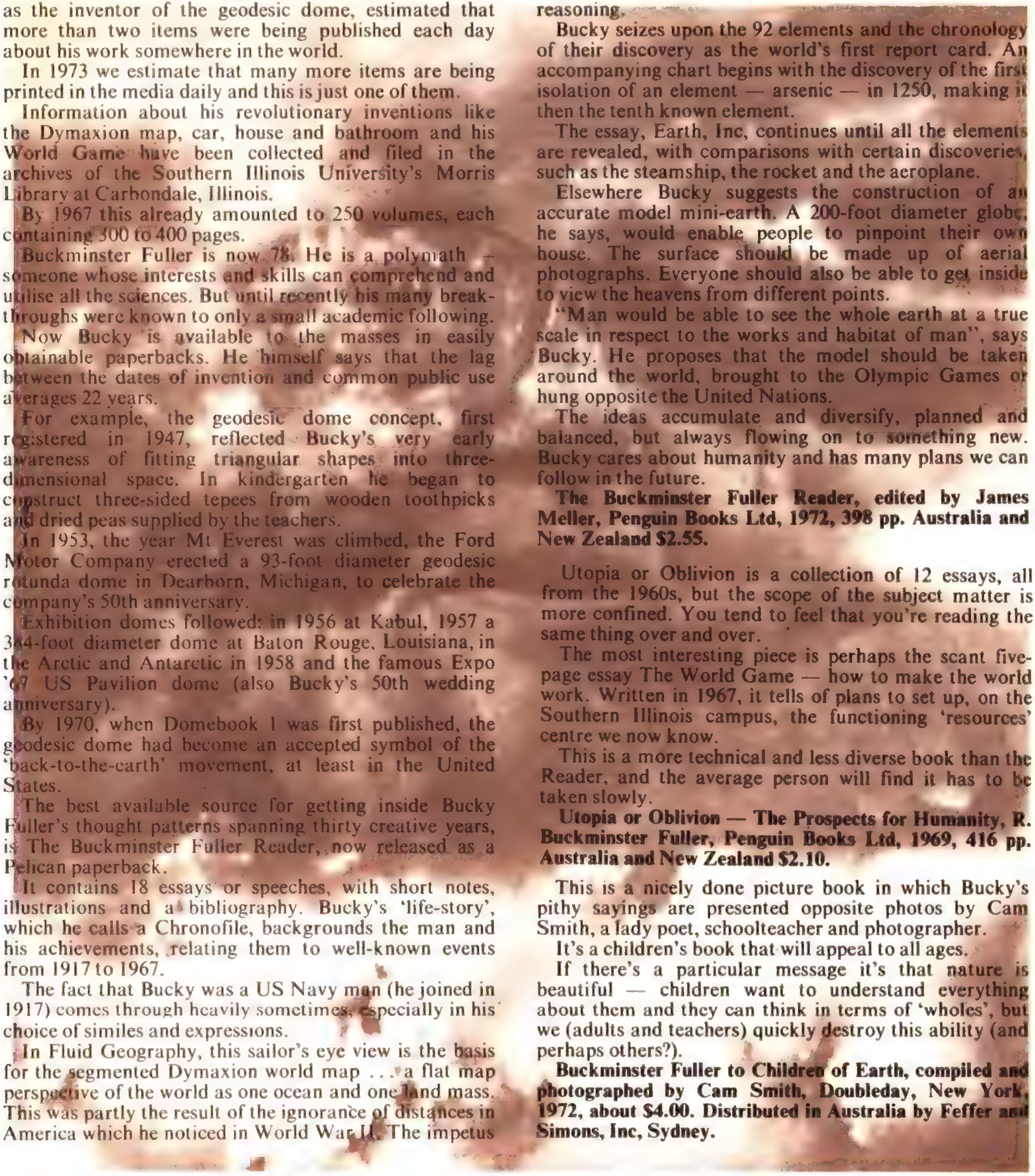
As a bit of a suggestion to any West Aussies or Interstaters over here who are looking around for a possible home site, have a poke around Parkerville, Mt Helena and Stoneville. York is also well worth a look-see — very nice.

And if you want a couple of interesting days looking at some beautiful ground, take overnight gear and, starting at Clackline (on the Northam Road), hike **down** the old railway line to Wundowie and, also starting at Clackline, hike **up** the old railway line as far towards Northam as you care to go. Lovely farm land either way, but down is nicest, with a number of old houses.

Keep up the good work Keith and Irene.

Peace and Joy, Alan Richards C/- Post Office, Meredin, Western Australia.

Bucky for the masses



In 1967, Richard Buckminster Fuller, known mainly as the inventor of the geodesic dome, estimated that more than two items were being published each day about his work somewhere in the world.

In 1973 we estimate that many more items are being printed in the media daily and this is just one of them.

Information about his revolutionary inventions like the Dymaxion map, car, house and bathroom and his World Game have been collected and filed in the archives of the Southern Illinois University's Morris Library at Carbondale, Illinois.

By 1967 this already amounted to 250 volumes, each containing 300 to 400 pages.

Buckminster Fuller is now 78. He is a polymath — someone whose interests and skills can comprehend and utilise all the sciences. But until recently his many breakthroughs were known to only a small academic following.

Now Bucky is available to the masses in easily obtainable paperbacks. He himself says that the lag between the dates of invention and common public use averages 22 years.

For example, the geodesic dome concept, first registered in 1947, reflected Bucky's very early awareness of fitting triangular shapes into three-dimensional space. In kindergarten he began to construct three-sided tepees from wooden toothpicks and dried peas supplied by the teachers.

In 1953, the year Mt Everest was climbed, the Ford Motor Company erected a 93-foot diameter geodesic rotunda dome in Dearborn, Michigan, to celebrate the company's 50th anniversary.

Exhibition domes followed: in 1956 at Kabul, 1957 a 384-foot diameter dome at Baton Rouge, Louisiana, in the Arctic and Antarctic in 1958 and the famous Expo '67 US Pavilion dome (also Bucky's 50th wedding anniversary).

By 1970, when Domebook 1 was first published, the geodesic dome had become an accepted symbol of the 'back-to-the-earth' movement, at least in the United States.

The best available source for getting inside Bucky Fuller's thought patterns spanning thirty creative years, is The Buckminster Fuller Reader, now released as a Pelican paperback.

It contains 18 essays or speeches, with short notes, illustrations and a bibliography. Bucky's 'life-story', which he calls a Chronofile, backgrounds the man and his achievements, relating them to well-known events from 1917 to 1967.

The fact that Bucky was a US Navy man (he joined in 1917) comes through heavily sometimes, especially in his choice of similes and expressions.

In Fluid Geography, this sailor's eye view is the basis for the segmented Dymaxion world map . . . a flat map perspective of the world as one ocean and one land mass. This was partly the result of the ignorance of distances in America which he noticed in World War II. The impetus for the World Game can probably be traced to this 1944 reasoning.

Bucky seizes upon the 92 elements and the chronology of their discovery as the world's first report card. An accompanying chart begins with the discovery of the first isolation of an element — arsenic — in 1250, making it then the tenth known element.

The essay, Earth, Inc, continues until all the elements are revealed, with comparisons with certain discoveries, such as the steamship, the rocket and the aeroplane.

Elsewhere Bucky suggests the construction of an accurate model mini-earth. A 200-foot diameter globe, he says, would enable people to pinpoint their own house. The surface should be made up of aerial photographs. Everyone should also be able to get inside to view the heavens from different points.

"Man would be able to see the whole earth at a true scale in respect to the works and habitat of man", says Bucky. He proposes that the model should be taken around the world, brought to the Olympic Games or hung opposite the United Nations.

The ideas accumulate and diversify, planned and balanced, but always flowing on to something new. Bucky cares about humanity and has many plans we can follow in the future.

The Buckminster Fuller Reader, edited by James Meller, Penguin Books Ltd, 1972, 398 pp. Australia and New Zealand $2.55.

Utopia or Oblivion is a collection of 12 essays, all from the 1960s, but the scope of the subject matter is more confined. You tend to feel that you're reading the same thing over and over.

The most interesting piece is perhaps the scant five-page essay The World Game — how to make the world work. Written in 1967, it tells of plans to set up, on the Southern Illinois campus, the functioning 'resources' centre we now know.

This is a more technical and less diverse book than the Reader, and the average person will find it has to be taken slowly.

Utopia or Oblivion — The Prospects for Humanity, R. Buckminster Fuller, Penguin Books Ltd, 1969, 416 pp. Australia and New Zealand $2.10.

This is a nicely done picture book in which Bucky's pithy sayings are presented opposite photos by Cam Smith, a lady poet, schoolteacher and photographer.

It's a children's book that will appeal to all ages.

If there's a particular message it's that nature is beautiful — children want to understand everything about them and they can think in terms of 'wholes', but we (adults and teachers) quickly destroy this ability (and perhaps others?).

Buckminster Fuller to Children of Earth, compiled and photographed by Cam Smith, Doubleday, New York, 1972, about $4.00. Distributed in Australia by Feffer and Simons, Inc, Sydney.

Buckminster Fuller montage by Cam Smith.

Crystal Hill

Di's youngest daughter Gina sits by the biggest of the three cascades at Crystal Hill.

BY DI MERCER

After a lifetime of journalistic "deadlines", bus catching deadlines, family meal deadlines and the urgent necessity to Get Things Done and finished by a certain time, my idea of heaven was some place where I could take my time to do each job with care and respect, not worrying about completion.

Retirement, to me, was not a slow-down proposition, I did not want to gently moulder in idleness, I just wanted to be able to stop hurrying.

It took a lot of thinking and many disappointments before I finally decided that, as 55-year-old females had so little place in the conventional business set-up, I would do something off my own bat, something I was already able to do and didn't need retraining for.

Conservation has always been my greatest interest.

So I looked for, and eventually found, a natural feature that needed conserving from bulldozers and progress in general.

It was a long, slow and terrifying operation to sell my existing house, buy the land and have a house built on it. Everyone thought I was either mad or impractical or worse.

Finally on June 29, 1971, I moved, with all my worldly goods, to the partly finished home on Crystal Hill, and the past two years have proved that, for me, I have done the right thing.

THE HILL WITH A VIEW

Crystal Hill is a boomerang-shaped ridge of rocks and scrub with a waterfall dividing it in two. It is scramble-steep for the whole of its length and covers 21 acres.

The soil, when you have shifted a ton or two of rocks to find it, is red volcanic clay which grew some stupendous trees before the timber-getters took to it. Today it is covered with a terrifying tangle of thorn bushes, lantana and second-growth trees of little value.

I hope to replant some of the original tree species and care for them so that one day the forest will be there again, the way it was before Captain Cook.

That is why I find this such a vastly satisfying undertaking.

By no stretch of the imagination can I possibly be expected to finish! In my lifetime I will barely be able to start the project and I hope it will be carried on by one of my four daughters and perhaps by their children, unto the fourth or fifth generation.

At present three of them are away in the city, making their fortunes (maybe) and the youngest is completely engulfed in the High School life system. But one day, perhaps they will be free to enjoy life as I understand it and, anyway, I have started something that will be of value to posterity.

So far we have succeeded in cutting a track through the scrub to the waterfall and various groups of school children and club members have come to look and admire.

"However did you find it?" they ask. Actually it's been hare all the time. It's hard to explain.

I have a plantation of 400 eucalypts, which are the start of my tree planting. Not all these will go on Crystal Hill, I give them to any conservation minded group with a tree planting scheme. Those I do plant, have to be protected from the attentions of a gumleaf-eating wallaby who lived on the land before I came, so it is a fairly slow process.

Most of my time is devoted to making a garden which I hope will make me almost self-supporting one of these days. I have a hydraulic ram which pumps water from the waterfall and have planted fruit trees, passionfruit vines, pawpaws and pineapples. Once the soil is broken up, it grows good vegetables and I have five hens.

To conserve the water from the ram I have put in several rock pools. (One thing, there is no shortage of materials for rock constructions.)

When I stop work I can look out over miles of sugar-cane fields to the Richmond River and the sea and the town of Ballina, eight miles away. The Pacific Highway cuts across the plain, a quarter of a mile and 250 feet below the house. It is a source of much gratification to watch all those cars and trucks rushing to and from — where? and why do they bother?

more letters

the city — the country?

Dear Earth folks,

Thought you might like to hear about our suburban farmlet.

We moved to Melbourne about 18 months ago from Tassie, loathing the thought of living in Melbourne's sprawling suburbia. After renting a "typical" brick veneer with a "typical pebble and lawn" garden, we decided to launch off into a home of our own.

Our choice was an old and somewhat decrepit weatherboard/fibro place on a double house block. This was no ordinary houseblock. Several old fruit trees stood in the garden (pear, plum, orange and lemon), along with almond trees and even a walnut tree. We planted the front garden full of native trees and plants. We're hoping they will grow up into a bushlike screen. We are lucky enough to have three full-grown gum trees already in the garden — these offer shade and protection for the young ones.

Our interest in gum trees led to our first beehive (and vice versa, when you keep bees you become more aware of flowering trees and flowers bees prefer). We now have three hives which during the summer had three supers on each. They have now been taken down to three single hives for the winter. (Bees reduce their numbers in winter and so need less space to keep warm). This past season our hives produced 250 lbs of lovely honey from the neighbouring trees and flowers. As you can guess we don't use sugar at all. The fruit from our trees was preserved in a honey and water solution instead of sugar.

We hope to become fairly self-supporting by growing all our own vegies — except for bacon used in flavouring some dishes we have vegetarian meals. So far we've been very successful growing crops in rotation. Our tomato crop exceeded 100lb. I bottled some, made chutney and still have stacks left to give away and eat fresh.

I guess we're lucky by having good soil to start with, but we keep it well fertilized with manure and home-made compost so we don't rob it of its nutrients.

So all you city folks, don't think you can't have your own little **EARTH GARDEN** in suburbia.

Good luck with your earthworms and compost, Sue, Neil and baby Frances, Lower Plenty, Victoria.

Dear Irene & Keith,

Being a keen gardener, but without knowledge, I certainly dig out a lot of EG. How stupid of me not to work organically before. But one is never too old to learn.

Indeed the garden gives us plenty of good and nice things to eat, but little is known about the medicine that comes from it.

One thing I do know, for I've tried it myself, is to put the milky sap taken from the papaw tree (Calica Papaya) on a burn immediately to take away the pain and blisters. It really works.

Good luck and best wishes from Hetty Siefken, Stratford, Queensland.

Dear Keith and Irene,

Your magazine crystallizes for us the very essence of Earth's and Man's hope for survival. Unfortunately, to enable us all to attain our goals of self-sufficiency through gardening, craft, artisanship and barter, there is usually the need to slave away in ulcer-country city and town jobs until enough cash has been saved to buy suitable land and other essentials. Pooling money and forming communes and suchlike are not to everyone's taste, so many couples will go it alone, despite the financial hurdle.

Our particular way of realising our ambition has been to play the capitalist game to our own advantage, and cash in on inflation. We scraped together a deposit on our present house and large yard in Sydney's western suburbs two years ago. Ever since, our organic garden has flourished, supplying large quantities of tasty vegetables to us and friends, and keeping us fit on the work. Meanwhile, the house has **doubled** in value, helped along by our own renovation work.

When we sell this (soon) and settle on the farm of our dreams, we'll be taking with us a large stock of plants grown and potted here, a portable herb garden, a small library, tools and handy gadgets, not to forget EGs 1-5+ and two headsful of ideas. Also our two beehives, one Italian, one Caucasian, and all the beekeeping equipment.

We think EG is about the best thing for Australia since rain and hope we see it around for many more engrossing, advertisement-less issues.

Best wishes, Dale and Brenda, Guildford, NSW.

Dear Keith & Irene,

Having just received **EARTH GARDEN** No 5 and part way through it I can't help wonder if any other readers feel strange like we do, or that we all are odd in some sort of way. Basically we all want a better life for all the family so some of us have to make a compromise, like living 30 miles out of Melbourne on a little half acre in a $20,000 home with oil heating (some of us like to be warm).

The compromise we are making is a small 18 x 40 ft area of organic vegetable garden, with no donkeys or goats to roam at will.

Maybe other couples like us see that this is a start and feel that unless both parties want to get up and get out into the real bush it could be a futile battle. So we wonder how many people feel this way — for we haven't, to date, read any letters to this effect.

EARTH GARDEN appears to be getting the message across to people who sit and write poetry in the garden or make their own pottery. Don't get us wrong, we aren't knocking **EG** or the readers, but it would be nice to hear about some of the other folk who live in flats where dirt is scarce, or normal 60 x 140 ft building blocks who find it difficult to make the break, or cannot because of their jobs. Or those who might like the night life in the cities, and so decide to compromise with natural foods and organic gardening.

In past issues of **EG** it was suggested to ask farmers if they could spare any spoiled hay or manure. So after one of our many trips to Maldon (Victoria) we returned to Mt Evelyn with a trailer load of cow dung and spoiled hay with a wardrobe perched on top (good for the silverfish!). We found that most farmers were very co-operative and one in particular said we could take as much as we could carry.

At the back of the farmer's cow shed was a heap of dung 15 ft in diameter and about 18 inches deep. Had there been much more it would have gone to the local tip in one of many trips made each year. We guess it would make most **EG** readers cry — so you obviously only have to be courteous and ask.

Maldon being a small country town, news spread quickly about the dung carters from Mt Evelyn. Next we knew a bundle of 50 very nice strawberry plants arrived on our front doorstep in the hope that they would go well with our new vegie plot.

On a recent trip to one of the local factories we acquired two steel wire boxes about 3 x 3 ft and 3 ft 6 ins deep, which will make a very nice collapsible compost bin as described in **Sunset Guide to Organic Gardening** as a space-saving idea. When the boxes are full and the compost has broken down enough to use all you do is cut a couple of wire ties in each corner and the retaining cage is removed, giving access to the compost.

Being almost novices we placed ourselves in the hands of the **New Gippsland Seed Farm** at Silvan. They were extremely helpful and suggested only a few peas, broadbeans and onions that would suit the May/June planting time — and at a mere cost of $1.20.

Even after planting in the first week in May and having rain nearly every day and with the helpful criticism of a neighbour who said they wouldn't get off the ground, little green heads have appeared after a fortnight, so here's hoping for our first crop.

Keep up the good work Keith & Irene and maybe **EARTH GARDEN** will help us to decide whether to sit on the fence or jump the right way.

Best wishes, Ken & Margaret Hanson, Mt Evelyn, Victoria.

Together with some 5,000 others we became the unique community which was the Aquarius Festival during ten days in May at Nimbin in northern New South Wales.

The name of Nimbin is already a symbol among those seeking an alternative lifestyle.

The triumph of Nimbin was that the festival took place. This was due to a large extent to the conviction and determination of the two major organizers, Johnny Allen and Graeme Dunstan, alias Kaptain Kulture and Superfest.

The spirit of Nimbin was absorbed and taken away by its participants and has spread throughout Australia and continues to shine.

Because the festival happened hundreds of people were able to confirm their beliefs that all of us really can live in a harmonious environment, co-operating with one another in a way that is conscious of the ecology, non-violent and tolerant of diverse beliefs.

Others saw these possibilities for the first time.

On an everyday level all of us were able to spend the time happily sitting in the sun, swimming, learning, building, talking, singing, dancing. The festival was in the fields.

The facts about Nimbin have been well and fairly recorded by the media, particularly by Colin James (Nation Review, May 18-24), Richard Neville (NR, one week later), The Digger (No 17, June), David Elfick (Tracks, June), Cosmos No 2 and GTK.

Originally Aquarius, the 'cultural' offspring of the Australian Union of Students, had planned a 'survival' festival. It was intended to buy a large country site, where a nucleus of people could stay on to start a new community when the festival had ended.

This proved impractical. Instead the emphasis shifted to the slogan "Recycle a Town" and Nimbin, a picturesque village on a hilltop, blighted by the declining dairy industry, was chosen as the focus.

Nimbin was recycled. Hundreds of willing helpers moved in before Easter, painting shop-fronts, establishing essential water supplies, toilets and showers, a restaurant and areas for the tribes to erect their domes, huts and tents.

Many of the original visions planned for Nimbin were fulfilled. There was a tent city, with a free, friendly atmosphere. There were isolated happenings — magicians, street theatre, minstrels.

Phillipe Petite, the French juggler, unicyclist and tightrope walker was like a one-man carnival, entertaining everyone. One Saturday he even walked across a tug-of-war rope stretched between two teams of 17-stone locals . . . probably good practice for his Sydney Harbour Bridge feat.

These things worked so well that they were models of their kind and can be freely adapted to other situations:

* The Learning Exchange. A flexible structure in which those with skills and those wishing to learn got together.

SPIRIT OF NIMBIN: Top: Phillipe Petite entertains. Middle: shelters by the creek. Bottom: the newspaper dome. Papier mache was stuck and taped over plastic balloon inflated with a vacuum cleaner.

SPIRIT OF NIMBIN

This resulted in kiln-building, potting, kite-making, yoga candle-making, weaving and other crafts and activities.

*The Fountain Tomato Sauce shop. This was so well run by the Brisbane Wholefoods Co-operative that it took the 'survival' right out of the festival. They provided fruit and vegetables that were fresh, plentiful and cheap.

You scooped out what you needed and paid by the honour system at the front counter. Graeme Cathcart, the organizing genius behind this (with support from the gang in Brisbane) seemed to be everywhere at once.

*The Feedwell Foundry Family Our friends (EG5) closed down their whole Melbourne operation for two weeks because they all wanted to go to Nimbin. They piled into a gaily painted bus with the Captain Matchbox Whooppee Band and drove more than 1,000 miles to get there.

Each day they baked about 600 loaves of bread in two sessions at 5.30 am and 9 am at no charge to Aquarius except for materials. At each session they ran a bread baking 'clinic', teaching ten people how to knead and shape the loaves of bread.

*The garbage system. This was sorted into 44-gallon petrol drums clearly marked for organic material, paper, glass and tins . . . a practical example of what could be done in our present communities.

*Children's Play Centres. There were two of these in which kids were engrossed in making 'houses' from milk cartons, painting, weaving their own walls, being taught all sorts of crafts. They really enjoyed the festival.

*Mulga Bill's Bicycle Band. This incredible bush band had all the heads' doing country dances and polkas and whoopin' and hollerin' to their catchy music at the Nimbin Oval.

The Feedwell Family at Basil's Bakery.

Photo: Nathan Thompson.

Watch out for their bus as they will be visiting Australian schools this year with the aid of an Arts Council grant.

Other good things were the alternative medical centre, the saunas, the Aboriginal Embassy, the daily Grass Leaves news sheet, the unpolluted, soap-free creek, the friendly locals and meeting lots of EARTH GARDEN readers.

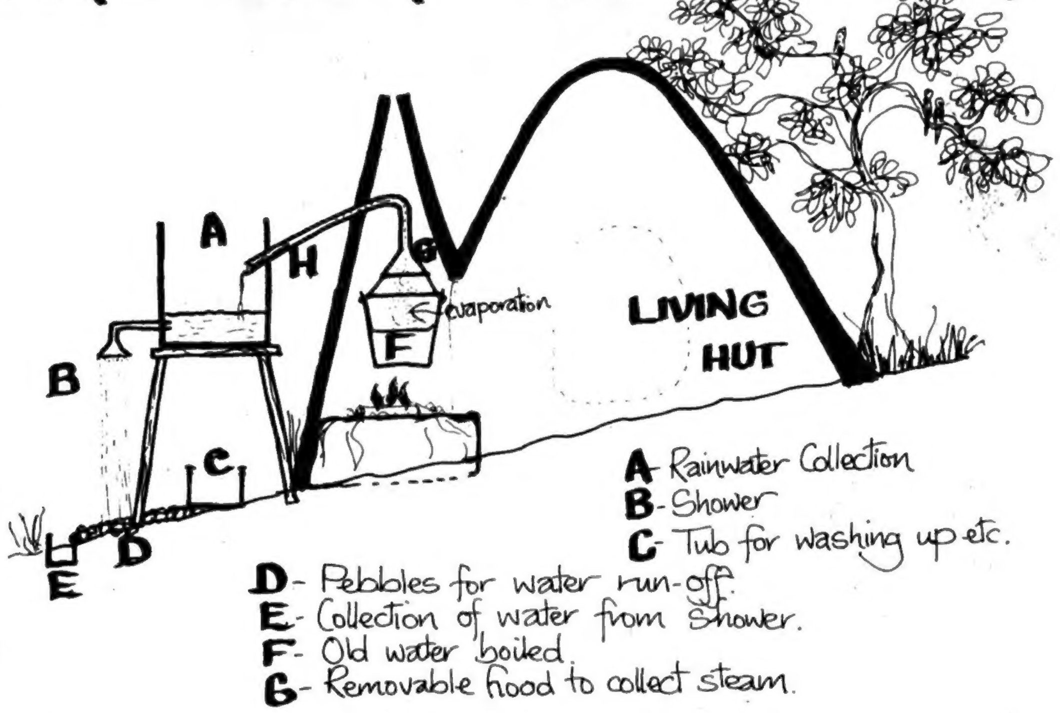
Long live the spirit of Nimbin.

Peace and love,

Keith & Irene

The Fountain Tomato Sauce shop. Inside (left) and outside (right).

MAKE YOUR OWN SHELTER


A
H
G
evaporation
F
LIVING HUT
B
C
D
E
A- Rainwater Collection
B- Shower
C- Tub for washing up etc.
D- Pebbles for water run-off.
E- Collection of water from shower.
F- Old water boiled.
G- Removable hood to collect steam.

Ideas for structures, recycled from the "Earth Rebirth" issue of Tharunka.

Alaister was Nimbin's magic gardener. A painted carrot signpost in the main street pointed to the garden, but you had to be determined to find it.

We succeeded at the third attempt, walking past a petrol station and an old shed full of derelict trucks.

Behind the shed was a small vegetable plot on raised beds. Within six weeks Alaister had conjured up delicious silver beets, lettuces, chives, onions, small carrots and marigolds and other flowers.

He gave us some Wong Bok cabbage, which we munched raw. He told us that the two Chinese varieties of cabbage he was growing resisted pests much better than the usual types.

SOLAR II will be in EARTH GARDEN No 7, out in November. It will cover Man and the Sun, solar water heating, desalination and the sun in the garden.

Read how The Company bought its land in Victoria, mudbricks revisited, natural dyeing, leathercraft and school gardens.

You could say EARTH GARDEN No 3 was our "Goat and Garden" issue. There was Michael Boddy's tale of Annabelle, goat notes by Dr Corona Adams, tips on milking and Alex Serrurier of the Northern Goat Club of Victoria wrote on where to get your goat. We had a whole section on different ways of making garden compost, a compost box and Robert Rodale's fast fertilizer (14 days to humus!), companion plants (cucumbers and potatoes do well near corn, peas or beans), and a garlic spray harmless to pets and humans, but lethal to garden pests.

But it would be misleading if we left you with the impression that EG3 contained nothing but 60 pages of goats and gardens. There was mud-brick building, Jeff and Carol's dome and waterwheel at Teapot in Tasmania, Tom the Domebuilder, Beaufort Herbs, the Yurt, summer salads, Michael Boddy on bread and vegies, basic pottery, and spinning, natural dyes, craft outlets, Glenfield Farm, and lots of letters from Earth People.

If you'd like to order EG3, fill out the form opposite. All our five back issues are still available at $1.20 each, or $5.50 the lot. Here's what's in the others:

EARTH GARDEN No 1
MOVE OUT ... A GAS TRUCK ... BACKYARD FARM ... OUR LIFE ON KIBBUTZ ... MELBOURNE'S MONTSALVAT ... NATURAL GROWING ... COMPOST & MULCH ... NO DIG ... GROW BEAN SHOOTS ... A GARDEN OF HERBS ... COMFREY, THE MIRACLE PLANT ... FRED ROBINSON ... MUSHROOMS.

EARTH GARDEN No 2
NEIL DOUGLAS AND THE ART OF GARDENING ... BUSH FORAGING ... START A GARDEN ... THE RODALE WAY ... NICOTINE SPRAY ... WHOLEFOOD SOURCES ... LIVING THE GOOD LIFE ... STONE & PAPER MULCHING ... HYDROPONICS ... THE KEYLINE FARMS ... THE CITY FOREST ... WHAT'S WRONG WITH FOOD ... WHAT TO DO ABOUT IT.

EARTH GARDEN No 3
MAGIC HERBS ... COMPOSTING ... BUILD A COMPOST BOX ... GARLIC SPRAY ... FAST FERTILISER ... NINE PAGES ON GOATS & HOW TO KEEP THEM ... MICHAEL BODDY'S TALE OF A DOE NAMED ANNABELLE ... COMPANION PLANTS FOR THE GARDEN ... BUILD WITH MUDBRICKS ... TOM THE DOMEBUILDER ... TEAPOT COMMUNAL FARM ... JEFF'S DOME & WATERWHEEL ... BREAD ... POTTERY & SPINNING ... GLENFIELD FARM.

EARTH GARDEN No 4
SPECIAL BEE ISSUE ... TOUCHING ON HISTORY, BEE-LORE, HONEY, PRACTICAL BEEKEEPING & THE SOURCES ... BACK TO THE LAND IN TASMANIA ... ED'S LIFE OF PEACE ... HYGIENIC COMPOST ... ROBERT RODALE ON THE TRANSITION ... A PURPLE PATCH ... ENZYMES & YOUR FOOD ... BLACK SHEEP ... TANNING AT HOME ... ANDREW'S ICY CANDLES ... THE NAMES OF FLOWERS ... THE GENTLE ASS — TALES OF DONKEYS ... WIZARD DOMEKITS ... WEAVE A WALL HANGING ... SAWDUST.

EARTH GARDEN No 5
SPECIAL WIND ISSUE ... THE WINDS, THEIR ORIGIN & MYTHOLOGY, WINDMILLS & ROTORS, BUILD A BUSH MILL ... RAKU POTTERY ... ITS TRADITION, A RAKU FIRING, SOME POTTERS' BOOKS, KILNS ... BACK TO THE LAND ON JUST 9 ACRES ... ROBERT RODALE'S IDEAL DIET ... FEEDWELL FAMILY'S FUNKY BREAD ... NEIL DOUGLAS ON THE BUSH ... CINVA RAM MUDBRICKS ... ANT BED FLOOR ... TANNING ... ROBBING THE BEES ... GARDEN TOOLS — SLASHERS & BASHERS ... FOOD CO-OPS ... FLOWERPOTS ... ORGANIC OUTLOOK ... FRUIT FLY TRAP ... SURVIVING IN SYDNEY ... SOURCES FOR SEEDS, TREES & PLANTS ... KEEPING CHICKENS ... POULTRY FARMING ... FREE-RANGE ... FABIAN DOUGLAS & THE HAMBURG ... FARMHOUSE KITCHEN ... RUTH'S FETTA ... THE VEGAN WAY ... MOON PLANTING ... CRAFT OUTLETS ... GRAIN MILLS ... WINDVANES ... WINDBREAKS ... FALLOUT SHELTER.

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